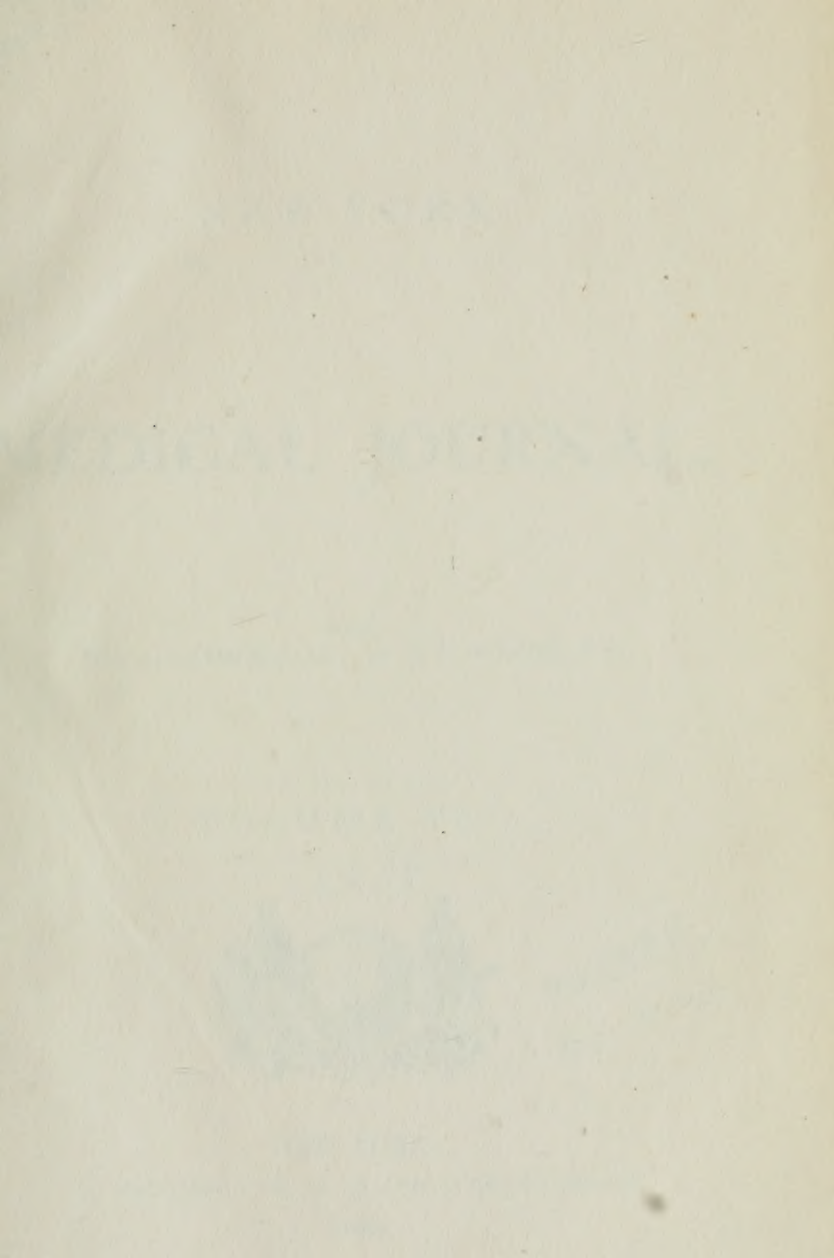


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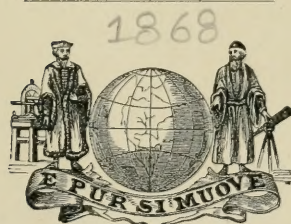
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EDITORS:

WM. A. HAMMOND, M.D., and E. S. DUNSTER, M.D

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MEDICINE AND THE COLLATERAL SCIENCES.

VOL. VII.]

APRIL, 1868.

[No. I.]

Original Communications.

ART. I.—*Microscopic Examination of Blood. Importance of Observing the Proportion and Condition of the Cell Elements of the Blood, and the manner in which they arrange themselves between the Slides of the Microscope. Condition, appearance and arrangement of the Fibrin Filaments of the Blood, in Health and Disease. Cystine, Stelline, Stellurine, Conchoidine, Pigmentine, Oxalate of Lime, Phosphates, Leucine, etc.; and Algid and Fungoid Vegetations in the Blood. These abnormal States and Bodies act as Specific Causes of Grave Pathological Derangements and Lesions.* By J. H. SALISBURY, M.D.

It has now been over eight years since I commenced the microscopic examination of blood, with the view of arriving at positive pathological conditions, etc., in this fluid in disease. These examinations have been con-

ducted with great care and patience; being often repeated at short intervals in the same case, in order to watch the successive changes brought about by treatment, and to confirm previous observations.

In this work of labor, I have already made over thirty-five thousand individual examinations. In all the more important of these, I have made careful drawings of the abnormal appearances and bodies present; and noted minutely the pathological conditions, and the attendant symptoms and lesions.

This paper is a brief summary of a portion of this labor. It is with much hesitation that it is presented in this incomplete condition. It was my intention, before saying publicly anything, to work quietly on, and spend much more time in labors so interesting to me, and that have aided me so much in treating disease; but a few learned gentlemen, who have taken great interest in the inquiries, have earnestly requested that they be published, so that others might commence and extend investigations in the same direction.

To obtain the blood, a clean puncture or cut is made, in any part of the body desired, the surface being previously carefully cleaned. The wound should be large enough to allow the free and immediate escape of a drop on slight pressure. The blood at once is transferred to the slide, then quickly covered with thin glass, and placed under the microscope. By a little experience, it may be under observation in one second from the time it leaves the blood stream.

WHAT TO LOOK FOR IN BLOOD EXAMINATIONS.

Blood examinations, to be of value in diagnosis, must

be made with great care. There is not one microscope in fifty, of those in present use, that is suited for this kind of study. They lack in definition, and often in not being sufficiently achromatic.

A drop of blood may frequently be explored for an hour or more with profit. If the case is obscure, and the first drop examined fails to throw light, explore another carefully. If you still fail, continue the search till you are perfectly satisfied that the cause is to be sought for somewhere else. Often much may be learned by allowing the blood to stand for from a few hours to two or three days between the slides, watching from time to time the successive changes taking place during the process of drying. These changes, compared with those taking place, under similar circumstances, in healthy blood, often throw valuable light upon certain peculiarities of the case.

The following is a list in detail of some of the conditions, states, and pathological products to be sought for in blood :

1. Color of blood to the unaided eye and under the microscope.
2. Consistence of the blood.
3. Rapidity of clotting.
4. Serum in normal proportion.
5. Colored corpuscles in normal proportion.
6. Colorless corpuscles in normal proportion.
7. Fibrin in normal proportion.
8. Serum in too small quantity.
9. Colored corpuscles in too small quantity.
10. Colorless corpuscles in too small quantity.
11. Fibrin in too small quantity.
12. Serum in too large proportion.
13. Colored corpuscles in too large proportion.
14. Colorless corpuscles in too large proportion.

15. Fibrin in too large proportion.
16. Colored corpuscles of normal consistence.
17. Colored corpuscles too soft, plastic and sticky, adhering together and being drawn out into thread-like prolongations as they separate.
18. Colorless corpuscles, normal in quantity, but so sticky and plastic that they adhere together in masses, endangering the formation of thrombi and emboli.
19. Fibrin meshes normal in size and arrangement, allowing blood cells to freely circulate through them.
20. Fibrin meshes too small to allow blood cells to freely flow through them, on account of which the blood cells arrange themselves in ropy rows, or ridges and masses, being held in the meshes of the partially clotted or contracted fibrin. In such cases the individual fibrin filaments are increased in diameter and opacity.
21. Colored corpuscles arrange themselves in nummulated piles.
22. Colored corpuscles have little or no tendency to arrange themselves in nummulated piles.
23. Colorless corpuscles, many of them ragged, partially broken down, and more or less curled and twisted and wrinkled.
24. No tendency of the blood discs to arrange themselves in nummulated piles; but remaining evenly and loosely scattered over the field.
25. The blood discs may exhibit a slight tendency to group themselves, having empty spaces between them.
26. The blood discs may arrange themselves in irregular compact masses, occupying but a small portion of the field.
27. The blood discs may arrange themselves in ridges, exhibiting a sticky stringiness and ropiness.
28. The blood discs may hold firmly the coloring matter, and be soft and plastic.
29. The blood discs may be high colored, smooth and even in outline, hard and rigid, and hold firmly and completely the coloring matter.
30. The blood discs may allow the coloring matter to escape readily, obscuring the individual outlines of the discs.
31. The discs may be mammellated.
32. The colorless corpuscles may be in excess or in too small quantity, and be normal in consistence.
33. The colorless corpuscles may be in excess, to a greater or less

extent, and be sticky, plastic and adhesive, having a tendency to stick together in groups and masses. These masses tend to hang in the meshes of the sticky fibrin. Under such circumstances there is great danger ahead from the liability to the formation of thrombi and emboli.

34. The colorless corpuscles may be in excess, and ragged and broken.

35. The colorless corpuscles may be in excess and smooth and even in outline.

36. Minute grains and ragged masses of black, blue, brown, or yellow pigmentary matter may occur disseminated through the blood.

37. Globules and masses of fat may be present.

38. Amyloid matter may be present.

39. Masses of broken down and disintegrating parent cells may be present.

40. Emboli of fibrin may be present in greater or less quantity. These emboli may or may not be filled with granular and crystalline matters.

41. Emboli of algoid spores may be present.

42. Emboli of algoid filaments and spores may be present.

43. Algoid filaments and spores may be diffused or disseminated through the blood, without being aggregated in masses.

44. Fungoid spores may be present.

45. Fungoid spores and filaments may be present.

46. Granules and crystals of oxalate of lime may be present.

47. Granules and crystals of cystine may be present.

48. Granules and crystals of phosphates may be present.

49. Granules and crystals of stelline may be present.

50. Granules and crystals of stellurine may be present.

51. Granules and crystals of matters of a miscellaneous character may be present.

52. Conchoidine may be present.

53. Pigmentine may be present.

54. Leucine may be present.

55. Creatine may be present.

56. The lithates or lithic acid may be present.

57. Inosite may be present.

58. Both the serum and blood discs may contain brain fat or cholesteroline.

59. The blood discs only may contain brain fat.

60. The zymotosis regulosis is present in the spore state.

61. The spores and filaments of *zymotosis regulosis* may be both present.

62. The spores of the entophyticus *hæmactus* may be present.

63. The spores and filaments of the entophyticus *hæmactus* may be both present.

64. The *penicillium quadrifidum* may be present, both in the spore and filamentous states of development.

65. The spores and filaments of the *botrytis infestans* may be present.

66. The colorless corpuscles may contain thin, bladder-like empty cells, of various sizes, that distend them.

67. The colorless corpuscles may contain algoid or fungoid spores, or both, which tend to destroy their normal contents and to distend the outside walls of the cells, so that they may be much larger than the healthy cell and appear like sporangia.

There are many other things to be sought for in pathological blood, which will be spoken of hereafter. I have given the foregoing list, in order to convey to the minds of those who have not conducted examinations in this direction, an idea of what to look for. The general impression is, that there is nothing to be found in the blood-stream, but the blood elements; and it has been considered that these elements are scarcely ever, to any great extent, pathological, and if they are, the microscope fails to throw much light upon the subject. This is a mistake. A good microscope and experience, and a little more patience and time devoted to blood examinations, will satisfy any physician that there is much more to be learned in this direction, than he has ever dreamed of. The work, however, must be patiently, carefully and honestly performed, and be most thorough. The more extended the knowledge of microscopic forms, of every conceivable variety, the more readily abnormal bodies are given their proper place

and importance, and the more valuable in diagnosis are such labors to the observer.

Some pathological products and states are best studied immediately after the blood is drawn, while others are better made out after the blood has stood a longer or shorter time between the slides, and become stationary, uncovering crystalline and granular products that were at first too much enveloped in blood cells to be discoverable. Often after having worked over a drop of blood for half a day, I have discovered new forms on re-examination.

In the nicer microscopic explorations, we are very apt to see only those objects and conditions we are in search of, overlooking many interesting forms and features, that after they have been pointed out to us, we are perfectly astonished, how, in the extreme care we have used, they could have been possibly overlooked. The truth of this remark will come home with peculiar force to those who have labored the most carefully in microscopic researches in new fields. The superficial observer cannot appreciate it, as he never studies out the nicer details of the individual features and forms under observation. His mind receives simply a vague impression of the general appearance, instead of grasping in detail well-defined pictures, which alone give positive and exact knowledge.

The symptoms and pathological consequences of the presence of stelline, stellurine, pigmentine, and conchoidine, are briefly set forth in my paper describing these substances, published in the *New York Medical Record*, for February 1, 1868. The symptoms and pathologi-

cal states excited by the presence in the blood and tissues of cystine, oxalate of lime, phosphates, and lithic acid, are described in my paper on Rheumatism, published in the American Journal of Medical Science, for July and October, 1867.

The symptoms and abnormal states excited by the presence of algoid and fungoid spores and filaments, have been briefly spoken of in several of my papers, and will be more fully set forth in a paper which is now nearly ready.

The presence of cholesterine in the blood disc of healthy blood, and in it and the serum in certain forms of disease, is the subject of a paper now ready, and which will soon appear.

Other pathological states produced by abnormal conditions of the blood cells, will constitute also the subject for a separate paper.

We will now present briefly some observations connected with the

CONDITION, APPEARANCE AND ARRANGEMENT OF THE FIBRIN FILAMENTS IN THE FRESHLY DRAWN BLOOD OF HEALTH AND DISEASE. A VALUABLE MEANS OF DIAGNOSTICATING CERTAIN PATHOLOGICAL STATES OF THE SYSTEM.

That the fibrin filaments exist ready formed in the blood stream, there is no possible doubt. By a little practice, the eye can begin to explore a drop of blood under the microscope, in one second after leaving the blood vessels. An experienced observer will immediately detect colorless corpuscles, masses of granules, and sporoid bodies, and sometimes crystals, that are fixed. or made almost stationary by some invisible

means. If the eye watches these closely, while the balance of the blood is moving this way and that, and running in little currents in various directions, in a few moments will be noticed faintly delineated filaments, crossing and recrossing each other, forming a mesh-work which holds fast these fixed cells, granules and spores. These are the fibrin filaments, which make up an almost invisible network in the freshly drawn blood. This network of organized fibrin gradually loses the almost perfect transparency it has in the blood stream, and becomes little by little more and more opaque and visible in outline, till in the course of five or ten minutes after it is drawn, the network of threads reaches its maximum opacity, the filaments being to the educated eye well defined.

The fibrin filaments are developed from the fibrin cells that are organized in the arterial extremities of the spleen and lacteal and lymphatic glands. These cells are mostly developed into filaments before they leave the glandular capillaries. The nucleus, or "yolk" of the fibrin cell forms the blood disc, while the portion of the cell outside of the nucleus is "spun" into a fine fibrin thread. This whole process is fully described in my paper on the "Histology and Functions of the Spleen and Lacteal and Lymphatic Glands," published in the *American Journal of Medical Sciences* for April, 1866.

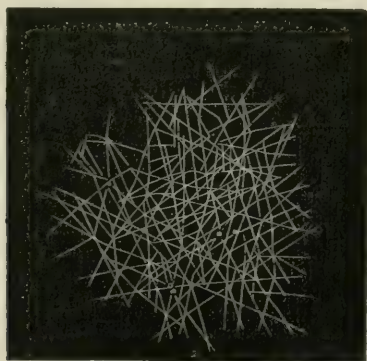
Upon the appearance and state of the filaments, and size of the meshes of this fibrin network, much depends. What might appear to be slight derangements in the parent cells that organize the fibrin cells, may result in grave pathological states.

The trouble, no doubt, starts primarily with defective or deranged alimentation ; or with some disturbance of the digestive apparatus of the alimentary canal ; by which improper, defective, irritating or poisonous food is transmitted to the parent fibrin cells of the spleen, lacteal and lymphatic glands. This imperfect food, little by little, deranges the digesting, assimilating, and organizing functions of these organisms, so that the fibrin cells they manufacture are in one or more ways pathological. These diseased cells produce fibrin filaments that are more or less abnormal. Now the causes that produce disturbance in the blood may be so far removed from the pathological results at the time we detect them in the blood, that they are entirely lost in the consideration of the subject. We only recognize, perhaps, the pathological products and conditions we find present in this fluid at the time of the examination. These we give the place of *causes* of the systemic disturbance. This may be to a great extent true, but the physician should be able to look back and beyond these specific excitants, to the primary or generic causes, which, perhaps, have been operating for years in deranging the functions of the mother cells. This knowledge he should have, that he may be able to impart such instruction to his patient, after specific or immediate causes are removed, as will enable him to live in such a way as to escape falling into the same pathological state again. Here is a field for much careful research and patient labor. It is in this direction that positive medicine may be greatly extended by close study, and honest, persevering investigation.

APPEARANCE AND ARRANGEMENT OF FIBRIN FILAMENTS IN HEALTH.

Where the system is in all respects healthy, where every part of the complicated machine is performing its functions normally; the colored and colorless corpuscles are distributed evenly throughout the serum, and the fibrin meshwork does not interfere with the free movement of the blood elements. As the natural process of clotting goes on, after the blood is removed from the system, the fibrin filaments contract, decreasing the size of the meshes of the network, so that the blood elements are to a considerable extent caught and held fast. If, however, the freshly drawn blood be stirred constantly with a rod, till the clotting process is over, the fibrin will be found adhering to the rod in white ropes and shreds, being almost perfectly free from the colored and colorless corpuscles. The reason of this is that the blood cells, by the motion kept up in the fibrin, are washed out from the network before the filaments have sufficiently contracted to hold the blood cells fast in the fibrin meshes. The filaments of fibrin

FIG. 1.



in the healthy blood are much smaller and less strongly marked than in rheumatic and tubercular states; and the meshes of the network are larger, allowing the blood cells to pass freely through them in all directions. Fig. 1 represents the fibrin network of healthy blood as it presents itself between the slides of the microscope, a few minutes after the blood leaves the blood stream. It will be seen that this network is free from spores, granules, colorless corpuscles, and crystals. There are no abnormal products adhering to the filaments, or fastened in the meshes. All the elements of the blood are normal.

APPEARANCE AND ARRANGEMENT OF FIBRIN FILAMENTS IN RHEUMATISM.

In rheumatic conditions the filaments of the fibrin network of the blood are in a tonic state of contraction. This increases the size of the filaments, making them more plainly visible; and decreases the size of the meshes, so that the blood is in the premonitory stage of clotting; the meshes being so small that they interfere with the free passage of the blood elements, they holding partially in their meshes the colored and colorless corpuscles. This makes the blood have a ropy, half clotted appearance between the slides.

In a few minutes after rheumatic blood is placed between the slides, the colorless and colored corpuscles arrange themselves in ropy rows and masses, leaving large irregular, clear spaces, in which may be distinctly traced the meshwork of fibrin filaments.

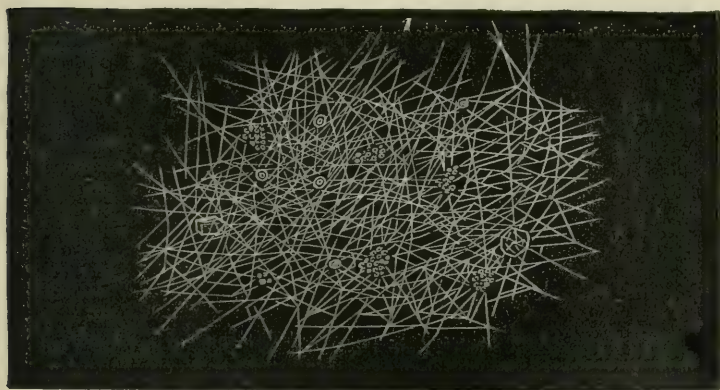
Frequently, for months before the patient has any idea that he is rheumatic, or in danger of being at any moment taken suddenly down with rheumatism, this con-

dition may be positively diagnosticated by the appearance and condition of the blood. By this mode of working, the causes of this dreaded disease may be discovered and removed before the patient is aware he is in danger, thereby saving perhaps, severe suffering, and grave pathological disturbance.

In rheumatism, there appears to be a tendency to a tonic contraction in all the fibrin elements of the body. The whole muscular system is more or less stiffened and rigid. That suppleness and elasticity of the perfect physiological state is gone, and a heavy, non-elastic, more or less lame feeling pervades the organism. This tonic muscular rigidity no doubt extends to the muscular fibres of organic life; in the walls of all hollow vessels, as those of the blood apparatus and alimentary canal.

This condition, together with the tendency in the connective tissue to contract under the influence of cold, renders a rheumatic patient extremely sensitive to cold and exposure. His system usually indicates

FIG. 2.



meteorological changes with as much sensitiveness as a barometer.

Fig. 2 represents the appearance and condition of the fibrin network in the blood of rheumatism, as exhibited in the vacant spaces between the slides. It will be seen that the fibrin filaments are more contracted and larger, and the meshes of the network smaller than in healthy blood. This difference is really more strongly marked than is represented in the drawings.

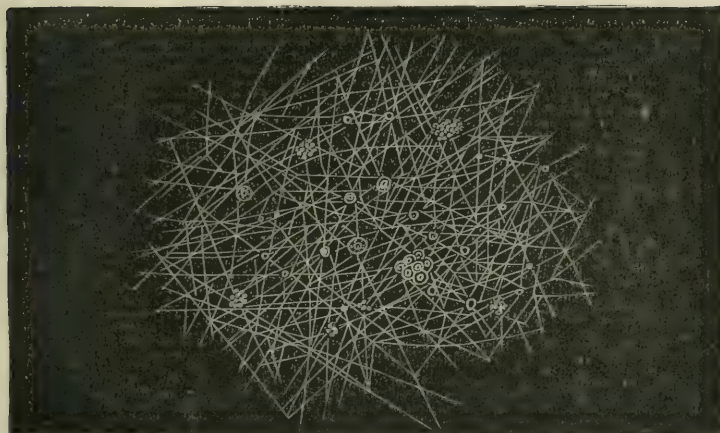
Spores, granules, colorless corpuscles, and crystals are seen fastened or caught in the meshwork. These bodies and conditions are pathological. They are never found present in healthy blood.

APPEARANCE AND ARRANGEMENT OF FIBRIN FILAMENTS IN PULMONARY
TUBERCULOSIS.

In tubercular disease the blood has somewhat the appearance presented in rheumatic affections, save that there is less tendency for the colored and colorless corpuscles to become aggregated in ropy rows and masses; yet the resemblance in many cases is quite strong. In tubercular phthisis, there are almost always more or less flying rheumatic neuralgia pains. The fibrin filaments are sometimes almost as large and well defined, and the meshes as small, as in rheumatism. These pathological conditions are present, for the reason that this disease is almost always accompanied with more or less of the specific causes of rheumatism. This matter will be more fully presented in a paper now nearly ready on the primary and specific causes of pulmonary tuberculosis.

At Fig. 3 is represented the network of fibrin fila-

FIG. 3.



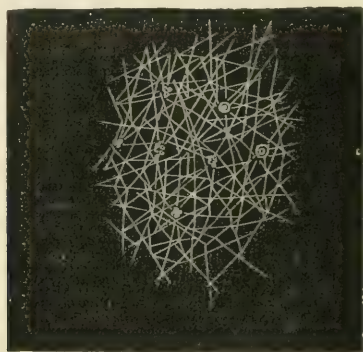
ments in pulmonary tuberculosis. The fibrin filaments are contracted and distinct, and the meshes much smaller than in health. In the meshes and sticking to the filaments are seen spores, granules, colorless corpuscles, etc. These bodies are fastened in the fibrin network, and the conditions present that fix and hold them are pathological.

APPEARANCE AND ARRANGEMENT OF THE FIBRIN FILAMENTS IN THE
BLOOD OF ANÆMIA.

In pure cases of anæmia, that is, in states of the system where the organized histological elements of the blood are in the proper proportion, but where they are in by far too small quantity, the great mass of the blood being serum, the filaments of fibrin are small and faintly delineated, and the meshes of the net work formed by them large, allowing the thinly scattered blood elements to float freely in all directions in the serum, between the slides, without any distinct evi-

dence of clotting. In such cases, the red and white corpuscles are evenly distributed throughout the serum, there being but slight tendency in the fibrin filaments to contract, hence the meshes remain so large that they do not entangle the blood elements. When, however, the rheumatic or tubercular diathesis accompany anæmia, then the fibrin filaments assume all the characteristics peculiar to these pathological conditions.

FIG. 4.



At Fig. 4 is represented the net work of fibrin in the blood of a pure case of anæmia.

APPEARANCE AND CONDITION OF THE FIBRIN AND OTHER BLOOD ELEMENTS, WHERE THERE IS A TENDENCY TO THE FORMATION OF THROMBI AND EMBOLI.

Whenever there exists in the blood abnormal bodies that are insoluble in the serum, more or less irritation of the lining tissue of the blood apparatus, especially in the heart and vicinity, is the result. Sooner or later, the organic muscular fibres lose a part of their tonicity, and there are frequently tired feelings, and wandering pains and aches, which are more likely to hang

about the cardiac region, than elsewhere. The insoluble matters floating in the blood, have a tendency to fix themselves in or near the heart, to the epithelial lining, the secretions from which assume a more or less plastic and sticky condition from the irritation excited. These fixed particles become centres for the gradual accretion of fibrin, which applies itself slowly, layer upon layer, and finally little by little we have formed thrombi. These from time to time break loose from their points of attachment, and float as emboli in the blood stream.

There is also another condition of the blood elements, where there is great danger of thromboses and embolism, and which may be readily diagnosticated by means of the microscope, in time to avert the serious results which may await the patient. This is *stickiness* and *plasticity* of the fibrin filaments and colorless corpuscles. This stickiness often extends even to the blood discs. Whenever this state is present, the colorless corpuscles are found, instead of being scattered about singly, sticking to each other in groups of two, three, four, or more. The fibrin filaments are also sticky and plastic, and impede the free flow of the blood cells through their network. The result is a marked tendency to the formation of thrombi and emboli. Emboli, under such conditions, are produced frequently, simply by the sticking together of the colorless corpuscles, forming masses of greater or less size. They are also formed by the breaking loose of thrombi. This sticky state of the blood is usually scorbutic, it arising mainly from deranged or defective alimentation.

In conclusion, I would say that this paper is but an imperfect brief of extended labors in this direction.

ART. II.—*Contributions to Pathology.* By E. R. HUN, M.D., Albany, N. Y.

IDIOPATHIC PHLEGMONOUS INFLAMMATION OF THE SUB-MUCOUS CELLULAR TISSUE OF THE STOMACH.

M. L—, æt. ten years, inmate of Catholic Orphan Asylum. Health always delicate. Complained of not feeling well, Friday morning, January 31st, and asked permission to remain in bed. At about eleven o'clock, one of the sisters, thinking the child had a cold, or some other slight indisposition, administered a dose of castor oil, which was soon afterward vomited. The patient continued to vomit everything she swallowed, until Sunday morning, February 2d, when I saw her for the first time.

I found her lying on her back; eyes sunken, and surrounded by a dark areola; pulse scarcely perceptible at the wrist, and very rapid; hands and feet cold and blue; some headache; slight tenderness over the epigastrium; tongue moist and coated with a white fur; temperature 96.5° F. Had a natural motion of the bowels yesterday evening. Can retain nothing on her stomach, having tried water, beef-tea, whiskey, and ice. Vomits almost immediately what she swallows, mingled with a greenish fluid, which she says is intensely bitter. I advised mustard applications to the ankles and wrists, a mustard poultice to the epigastrium, and one table-

spoonful of equal parts of milk and lime-water, to be taken every half hour.

She retained the first two spoonfuls, but rejected the third. From this time she vomited continually, remaining perfectly conscious, but sinking rapidly, and died at 5 a. m., Monday.

Autopsy, six hours after death.—External appearance of the body; natural. *Thorax*: the right lung was firmly adherent to the walls of the thorax; otherwise, natural. *Abdomen*: the stomach appeared very heavy and large. Upon removing it and opening its cavity, it was found to be empty, but the walls were fully half an inch in thickness, and consisted of the mucous lining and peritoneal investment, with an intervening layer of purulent deposit. A milky liquid could be pressed out from the cut surface in abundance, which responded to the chemical and microscopic tests for pus. A large number of inflammatory granular corpuscles were observed under the microscope, mingled with the pus corpuscles. This purulent infiltration of the connective tissue extended over the whole circumference from the cardiac to the pyloric orifice of the stomach, and the line of division between the gastric and duodenal mucous membrane was marked by an abrupt ridge caused by the lifting up of the former by the sub-mucous purulent exudation. The gastric mucous membrane was of rather a deeper color than usual, and the peritoneal coat, although somewhat injected, presented a smooth, shining appearance, without any inflammatory product. A microscopic examination showed the termination of the gastric follicles, sur-

rounded by pus corpuscles, while no trace of the muscular fibres could be found, except just under the peritoneum, thus demonstrating that the inflammatory action involved only the connective tissue intervening between the mucous and muscular coats. All the other abdominal viscera were examined and found normal. A firm adhesion existed between the convex surface of the liver and the diaphragm.

In looking up the authorities in regard to the above rare and interesting case, I find that Rokitansky states that "idiopathic inflammation of the cellular tissue of the stomach, resembling pseudo-erysipelas, and passing on to suppuration, is a very rare phenomenon; it not infrequently occurs as a secondary process, analogous to the metastases of specific acute dyscrasiæ. The parietes of the stomach appear thickened; the stratum of sub-mucous tissue is distended with pus; it is soft and friable; the superincumbent mucous membrane is reddened, and, at intervals, tense. After a time it gives way at these points, and by numerous irregular cribriform openings, the pus exudes into the cavity of the stomach." Lebert, in his work on Pathological Anatomy, speaks of a "rare disease, usually acute," under the head of "Phlegmonous sub-mucous inflammation of the stomach," and gives an account of four cases, with a description of the post-mortem appearances. Two of these cases were idiopathic, one metastatic, (following puerperal peritonitis,) and in one which he calls "Phlegmon propagé," the patient, having suffered for a long time from a chronic gastric disorder, was suddenly attacked with erysipelas of the face, followed by pulta-

ceous stomatitis and death in nine days. The autopsy revealed purulent peritonitis, and distinct purulent deposits in the sub-mucous cellular tissue of the stomach. Both J. P. Frank and J. Frank refer to phlegmonous inflammation of the stomach, and Habeshon reports a case, with the autopsy, in his work on Diseases of the Alimentary Canal.

DYSENTERY ; PERFORATION ; FÆCAL ABSCESS.

Mr. E—, æt. 40, German. November 1st, 1866, was attacked with dysentery, and suffered from this disease until the first part of February. During the latter part of December and the first part of January, he frequently passed from the bowels a peculiar spongy substance, sometimes in masses as large as the two fists. This substance was examined under the microscope, but its structure could not be accurately determined. The dysentery ceased about the 1st of February, and on the 27th of the same month he appeared in perfectly good health, and in fine spirits.

March 13th, he began to complain of pain in the right iliac fossa, and in the leg and knee. These pains became quite severe, and on the 19th instant he began to sink with symptoms of septicæmia, and died during the night of the 22d instant.

The autopsy was made on the morning of the 24th instant. Body sallow, and much emaciated. Upon opening the abdomen, the viscera appeared healthy, but upon trying to remove the large intestine, it was found that the caput coli was adherent to the peritoneum covering the psoas muscle. This adhesion having been broken up by the finger, a sudden escape of the con-

tents of the intestine into the peritoneal cavity took place, and upon examination a perforation of the intestinal wall was found just at the ilio-cæcal valve. The perforation was of a rounded form, and about one third of an inch in diameter, and the edges were clean cut as if made by a punch. Around the perforation was a quantity of false membrane, gluing the intestine to the psoas muscle and the appendix vermiformis, which was empty and apparently healthy, and was also bound down by this exudation. Examination of the surface of the psoas muscle showed an opening leading into its substance at a point exactly corresponding to the situation which the intestinal perforation occupied. Happening to rest one hand upon the thigh of the subject at this moment, a large quantity of matter, identical to that which escaped from the intestine, was forced out through the opening in the psoas muscle. Upon carefully dissecting the parts, it was found that the interior of the psoas magnus was hollowed out into a large cavity, which extended downward under Poupart's ligament, and there opened into the connective tissue surrounding the femoral vessels. The contents of the intestine had filled the cavity, and had burrowed in this connective tissue so as to extend two thirds down the thigh. The connective tissue lying over the pectineus muscle and the symphysis pubis was infiltrated with fæcal matter. The anterior crural nerve was held fast in the lymph which glued the intestine to the parietal peritoneum. The transverse and descending colon were thickened, and at some parts seemed to be strictured. The small intestines were normal. The peritoneum

was smooth and shining everywhere except just about the perforation. The other viscera were examined and found healthy.

ART III.—*Wood's Operation for Radical Cure of Hernia.*

By BENJAMIN HOWARD, M.D., Lecturer on Operative and Minor Surgery, in the Medical College of the University of New York.

FROM successive observations of the progress of several of Mr. Wood's patients, I was induced to avail myself of the first opportunity of performing his operation for the radical cure of hernia.

The following observations are chiefly concerning the manner of prosecuting one only of the several steps of the operation. The inferences respecting the general value of the operation, if indeed such could be allowed from what is here exhibited, are I think clearly favorable.

July 18, 1866, I performed this operation upon Timothy Sullivan, a healthy laborer, aged 25, for an oblique inguinal hernia of the left side, its first occurrence dating back about two years prior to the operation.

Although the hernia was not large, its inconvenience was such as to render the patient anxious for the operation. With the assistance of Dr. Hackley, of the New York City Hospital, and others, the patient was etherized, and the operation performed; the needle and wire, with the use of which I had become somewhat familiar through the frequent kindness of its

author, were bought from the maker employed by himself. No obstacle was encountered in the steps of the operation, but when about transfixing the fascia in front of the cord, I felt a little undecided which of the two methods of doing it described by Mr. Wood to adopt. The first is as follows: "The sac of the hernia and the fascia covering it opposite the scrotal aperture is then pinched up between the finger and thumb, and the spermatic cord is slipped back from their grasp, from without inward and a little upward in the direction of the incision across the scrotum, close to and in front of the spermatic cord; a slight twist given to the point of the needle will enable it to take up all the structures which lie in front of the spermatic cord, and at the same time to enter and emerge entirely within the limits of the scrotal incision."*

The other method is: "In still smaller cases, wherein the sac does not descend much beyond the external ring, the last step of transfixing the fascia must be performed nearer to the insertion of the pillars of the ring. In accomplishing this manœuvre, the needle may also be made to take up a portion of the pillars themselves close to their respective insertions on the inside of the spermatic cord. The crest of the pubis will afford a good guide and protection to the deeper parts, the point of the needle being made to slide close to the bone."†

As this case corresponded to the class last mentioned, the transfixion was effected as therein directed, care being taken to make the point of the needle "slide close to the bone."

* Vide Wood on Rupture, page 110.

† Vide Wood on Rupture, page 112.

The wire was now in situ, crossing itself and transfixing the parts as the operation requires, the free dependent ends were twisted upon each other, and all was ready for permanent invagination.

It was here I encountered the difficulty I had feared might arise; the fixation of the parts effected by making the "wire slide close to the bone," and "take up also a portion of the pillars themselves close to their insertions," arrested the progress of invagination, making its completion impossible, and the last attachment of the wire could not be drawn up into the canal so as to plug it throughout its course.

This is the point to which I would call the attention of those contemplating this operation, and in order that they may be spared the same difficulty encountered by myself, I would advise adoption of the first of the two methods above described, in transfixing the sac or the scrotal tissue in front of the cord.

Though strongly inclined to withdraw them, the wires were left as placed. The operation was completed and the wound dressed in the usual manner.

Between the second and fourth days there was more local inflammation and general disturbance than I had observed in any of Mr. Wood's cases in King's College Hospital. This was doubtless largely owing, however, to the circumstances; the patient being confined in a small apartment having a temperature at midday of 102° Fahrenheit for several days in succession, and swarming with flies and mosquitoes.

As the patient insisted that the presence of the wires was the sole source of all his discomfort, I yielded to

his importunity and removed them on the fourth instead of about the tenth day after the operation.

I regretted this circumstance very much, fearing it would deprive this, the first operation of its kind in the city, of its chief advantages. In this regard, however, the results disappointed my apprehensions.

After removal of the wire there was considerable supuration and tenderness, both of which daily diminished, so that at the end of two weeks the patient began to come to my office, the wound was nearly healed, his general health and spirits were good, and he felt great confidence in the success of the operation.

He called again six weeks after the operation, and stated that he had been at work at *coal-heaving*. I tested the parts thoroughly, but could procure no sign of impulse; the course of the canal felt as if occupied throughout by a hard cord.

Sept. 21 I again saw the patient, when he expressed great gratitude for what he regarded as a sound and radical cure.

The patient soon after left the city, since which I have been unable to obtain further information about the case.

Although what I have described as an impediment in the operating did not prevent complete success as far as the history of the case is known, I deem it worthwhile to state these particulars, as I apprehend the same difficulties may occur to others, tending to embarrass if not to discourage them in the prosecution of this very rational and promising mode of treatment. To those who are inexperienced in this operation, then, I

suggest selection of the first of the two methods described as above for transfixion of the scrotal fascia, or the sac, in front of the cord, because thereby *the invagination is more easy and complete, the operation more satisfactory, and the cure is likely to be more sound.*

ART. IV.—*On the Coalition of the Cerebral Membrane with the Substance of the Brain.* Translation from Mettenheimer's pamphlet on the Pathological Anatomy of the Brain and its Membranes. (Schwerin: 1865.)

THE cerebral membrane has often so firmly coalesced with the substance of the brain, that some force must be applied in taking it off, so that the surface of the brain is not found as usual to be smooth, but uneven, and apparently injured. This is very frequently seen in the bodies of those who died of the so-called *paralysie générale*; but it also happens in other diseases that the pia mater coalesces with the cortex cerebri; but there are cases of general paralysis in connection with idiotism, in which coalition is wanting. If, as is usually the case, the cerebral membranes can be easily separated from the cortex, we may succeed, even in very soft brains of children, and strongly moistened brains of adults, in cutting without trouble from the cortex thin laminæ for microscopic examinations; we shall, on the other hand, not succeed in so doing when the cortex has firmly coalesced with the membrane. After forcible separation of the same, the cortex appears much softer than usual, and the elementary connection of their

microscopic substance has been so thoroughly destroyed that but little of it can be recognized. If we desire in this case to obtain thin slices for investigation, we must first harden the brain with its covering, and then cut through both the membranes of the cortex. We can plainly perceive how rapidly the vessels extending from the pia into the substance are shivered and changed into a capillary net. To satisfy ourselves of the extensive development of vessels, and of the manner of their distribution, we may apply the following method: After having separated the membrane from the brain, place a small portion of it under water, and treat the visceral side of the membrane with a brush, until the remaining cortical parts shall have been completely removed. We shall then find that the inner surface of the pia is not smooth, but looks velvet-like, owing to a very dense and uniform vegetation of vascular fibres, (filaments,) spreading sometimes over the entire inner surface of the pia, i. e., over the entire surface of the brain. We notice this circumstance by examining it through a magnifying glass, but more plainly if you fold a little piece of that membrane in such a manner that the visceral side is turned outside; and if you then examine by a microscope the edge thus formed, you will see large numbers of vessels and even vigorous rootlets extending in twigs into the cortex. If a little piece of a sound pia is folded in a similar manner and examined, we are struck by the great difference between the two. In healthy persons, too, the connection between the pia and brain is effected by vascular fibres, but these are much more tender, and not as com-

pact, but rather sparsely produced. It is well known how easily the pia may, in normal brains, be separated from the cortex; the surface appearing quite smooth, so that we can only by a very close attention recognize the tiny dots indicating the little vessels growing out of the pia.

The other extreme, namely, the complete absence of connection between the pia and the cortex, may also occur; we found, for instance, that on the convex side of a greatly atrophied brain of an octogenarian, the pia had been separated from the cerebral substance by a stratum of fluid, and besides that the process of the membrane penetrating between the convolutions had shrivelled and become disconnected with the same. In some cases of coalition of the cortical matter of the brain with the membrane, the uncommon multitude of small blood-vessels is remarkable. The cortex is of a reddish or even red color; the tiny filaments run by the side of each other like the threads of cloth, while the other elementary particles of the cortical matter fill the interstices in the shape of milky pulp. If this circumstance is not at once perceived, or if the tiny filaments have disappeared on account of death, we may ascertain the distribution of vessels in the cortical matter by the following proceeding: Place a portion of the cortical substance on a glass plate, cover it carefully by another little plate, and press it by means of a compressor in a uniform manner, until the substance has spread, and become as transparent as possible. From this uniform milky mass the vascular fibres will proceed with their ramifications like islets, and

you can, by a microscopic glass, perceive at once how numerous, and of what size the little vessels in a given quantity of cortical matter are. On examining the vascularisation of an affected brain still more closely, it is observed that the vessels differ in their ramification and construction from the capillary vessels pervading the cortical substance of a sound brain. These vascular groups, obtained by submitting small portions of cortical matter to a slight pressure between two glass plates, seem to be produced by the fact that such vessels form fibres of much greater strength than in the sound cortex, and that they are not attenuated by the gradual disappearing of branches, but rather suddenly ramify and spread in clusters of four, five, six, eight, and even more branches. The vascular fibres are, moreover, swelling with blood, and may without difficulty be recognized by the naked eye; but their tubes are, notwithstanding their uncommonly large diameter, thin, absolutely without any structure, and indicating only occasionally some transverse lines that point to circular fibrous growth. By means of this proceeding the vessels of the affected cortical substance exhibit a great affinity to the histological air-vessels occurring frequently in morbid transformations and exudations. The tissues of capillary vessels of sound cortical substances look quite different and characteristic: the capillary vessels are extremely narrow, and almost always of the same lumen, (light,) and we rarely meet with stronger filaments. The meshes of the net formed by them have generally very acute (pointed) angles, their sides do not run in straight lines,

but are gently curved like those of spherical triangles. The vessels themselves are stronger, longer, and more numerous in brains of persons dying of general paralysis than in sound brains. The change in pachymeningitis, by which the inner surface of the dura loses its usual appearance and looks like a piece of velvet or plush, bears some affinity to the changes of the pia coalescing with the cortical substance of the brain. This latter coalition is generally considered the product of a chronic inflammation, which may not be objected to on account of the wide margin given to these chronic diseases, but we must add that the comparison with pachymeningitis has, like every comparison, its weak points. It cannot be doubted that pachymeningitis is an inflammation; for we find here, besides the symptoms pointing to an important corporeal suffering, excess of blood in the vessels of the inflamed membrane, formation of new vessels, and undoubted effects of inflammation, thickening of the affected membrane, exudations, and extravasations. If the soft membrane of the brain becomes subject to the before mentioned process, the symptoms consist very frequently less in physical sufferings than in psychical derangements, and may for some length of time recede so completely, that one can only with any certainty infer the anatomical nature of the disease who has observed it in its completely advanced stage. The effects of inflammation, too, cannot here be traced as easily as in pachymeningitis. There is, it is true, a finely fibrous tissue, which is said to emanate from the tissues of the pia, to prolong itself into the brain, to cause a firm connection between the membrane and the

cortical substance, and to displace the peripheric parts of the brain; but this occurrence seems to be of secondary importance when compared with the powerful development of the vessels. The presence of this tissue, and even the excessive exuberance of blood in the vessels, would, however, justify the supposition of chronic inflammation, not any more (nor any less,) than if we would trace every formation of new tissues and vessels to a chronic inflammation. There is, after all, not much gained by it, until we succeed in elucidating the similarity of the chronic to the acute inflammation. We found in the examination of no brain where the membrane had coalesced with the cortex, any coagulated fibrin, matter, blood, or any products arising from the regressive metamorphosis of those substances in any considerable quantity. There was but once found in such cortical substance a very considerable number of fine, yellowish molecules, evidently of a fatty nature, which might have been brought forward by the regression of a product of inflammation. There were always, however, in such cortical substances, the normal constituents of the grey substance, the delicate, viscid molecules, the round and oval granulated, and finally ganglion globules. Differences in individuals and of age, may, as well as pathological causes, explain the fact that those globules cannot always be discovered with the same facility, and that sometimes a larger and sometimes a smaller number of these granulated globules are interspersed between the other elementary component parts. Now, although we did not succeed in finding many products of inflammation in the cerebral mem-

brane, still, there must be in the connection of the tissues, a difference between the sound cortical substance and the one coalesced with the pia; for the sound cortical substance is not so easily distributed in water as the affected, nor does it impart to it such an emulsive quality.

It is not difficult to imagine the injury done to the cerebral functions by the unlimited increase of the vessels leading from the pia into the cortical matter. A brain so affected is infinitely more liable than a sound one to all the fluctuations of the circulation of the blood in the vascular system. Every excess of blood in the pia, resulting mostly in but a moderate agitation, will here produce decidedly stronger effects; the same difference will necessarily occur in a want of blood. The excessive growth of vessels issuing from the pia, and taking root in the cortical substance by means of thousands of fibriles, will both supply and withdraw nutrition, and expose the cortical substance to a much coarser and violent change of matter. It would be hardly exaggerated to imagine in perfect cases of coalition of the pia with the cortex, the pia as a kind of parasite, rooting in the brain, and first influencing the vitality of this noble organ, afterward controlling, and ultimately seriously disturbing and threatening it. The brain suffers in such a coalition a loss in its character as the noblest organ of the nervous system, at the expense of an excessive development of the hæmic life in its periphery. This morbid coalition should not be confounded with the coalition met with in embryonic life and small mammalia, which is, strictly speaking,

no coalition at all, and might more properly be termed a non-separation of the membrane from the cortex. If we examine fresh brains of embryos, two and a half or three and a half months old, we cannot distinguish and prepare the pia as a separate membrane. The surface of the brain is indeed multifariously interwoven by vessels, above which there may be lying a thin epithelial layer, but this does not yet constitute a membrane of the compactness and independence of the pia of an adult. The brain receives in this period of foetal life its largest supply of blood from the richly vascular sulcus which fills the still very large lateral ventricles. These latter gradually diminish in size, the gelatinous matter contained in them and their vascular meshes shrink, and form finally the vascular plexus, which appear but as a scanty rudiment when compared with the vascular sulcus from which they issued. While thus the nutrition of the cerebral substance diminishes from the lateral ventricles, a greater vascular activity is developed at the surface of the brain, and out of the thin, illy-defined layer is gradually formed the vascular membrane, the independent existence of which, from the birth of the child, can no longer be doubted. The process, as we may ascertain in fresh embryos of seven to eight months, is the following: First a vascular gelatinous tissue is developed exteriorly to the cortical matter; it gradually condenses and becomes membranous. The difference between the hard and soft membrane is striking. The dura forms in a foetus of two and a half months, a hard, whitish membrane, exhibiting a certain laxity only in its innermost layers, and which has been separated in

tender threads and shreds consisting of tissues. Here, as well as in older embryos, the substance of the brain, in which there is as yet no distinct grey or white coloring, is in immediate contact with the innermost, soft, moist layer of the dura. The brain of small mammalia, for example, the domestic mouse, is very similarly constituted. If you open the skull, you must take care not to cut into the cerebral substance, as it completely fills its cavity. The inner surface of the skull bones is coated by an extremely thin but greatly vascular (fibrous) periosteum, the representation of the hard cerebral membrane. On the surface of the brain we perceive numerous ramifications of small vessels, but we do not succeed in getting a separate vascular membrane.

The grey substance exhibits a wonderful abundance of vessels; it is imbedded in the meshes of the net of tiny capillaries, this net constituting the real foundation of the hemispheres, and consists essentially of the well-known adhesive molecules and the globules imbedded in them. The vessels scattering here on the surface of the brain, form only a part of the vascular net which penetrates the entire brain like a tendinous framework. There is, in these small animals, no independent membrane separated from the brain as in man. We must note in particular, Lebert's observation, that the brain of all executed individuals examined by him was of a viscous quality, in consequence of which particles of this organ would always cling to the membranes in the process of their separation. He found this viscous property of the brain also in all decapitated animals, and

states that he could only with great difficulty remove the membranes without taking along some little portion of the cerebral substance. The manner of death might account for this observation, if it could be proved that it is calculated to increase the natural viscidty and tenacity of the cortical substance. But this is only a conjecture, while it is an established fact that the condition observed by Lebert has nothing to do with the coalition of the membrane with the brain.

Reviews and Bibliographical Notices.

ART. 1.—*Stone in the Bladder, with Special Reference to its Prevention, Early Symptoms, and Treatment by Lithotrity.* By WALTER J. COULSON, F.R.C.S., Surgeon to St. Peter's Hospital for Stone and other Diseases of the Genito-Urinary Organs. London: John Churchill & Sons. 8vo., 1868.

THIS is an octavo volume of 124 pages, consisting in part of three clinical lectures delivered at St. Peter's Hospital, on the early symptoms of stone, the best method of its detection, the preparatory treatment of patients, the mode of operating by Lithotrity, the amount of work to be done at each operation, and after-treatment, with notice of complications. The remainder of the volume is occupied by an essay on "Prevention," comprising a view of the different varieties of urinary calculi, and of the best means, hygienic and medical, of preventing their formation. The leading idea of the book is that so forcibly put forth by Sir Henry Thompson, in his recent work on Practical Lithotomy and Lithotrity, that the early detection of stone in the bladder, and its removal by the aid of the lithotrite, while still small in size, is the treatment

to be pursued whenever practicable; and with this view Mr. Coulson's book is useful as containing the experience of a hospital surgeon as to the value of the several symptoms of urinary calculus leading to its early detection. He enforces, especially, the use of the microscope with the view of detecting the presence of blood in the urine. The presence of blood corpuscles with epithelium from the urinary passages, occurring after exercise and absent during rest, "not only furnish strong corroborative signs, but indicate the exact seat of the calculi." The value of Dr. Roberts's solvent treatment in cases of uric acid calculi is discussed, with a rapid and intelligent resumé of the whole subject.

We were surprised on reading a case in which Dr. C. ruptured an organic stricture by means of Holt's dilator, and proceeded shortly afterward to crush a small stone in the bladder of the same patient. But we were not surprised to learn that several days later a fragment of stone was found impacted in the urethra, "immediately behind that part where the stricture had been ruptured." The patient, however, was discharged cured. This is a novelty in Lithotrity, but we are not disposed to criticise it severely, as we believe in progress, should further experience justify such practice.

The reader should not confound the present author with the veteran London surgeon, William Coulson, whose works on "Diseases of the Bladder and Prostate," on "Lithotomy and Lithotrity," etc., have been so long before the profession.

ART. 2.—*Chronic Diseases of the Larynx, with special reference to Laryngoscopic Diagnosis and Local Therapeutics.* By Dr. ADELBERT TOBOLD, Berlin. Translated from the German by G. M. BEARD, M.D., etc. New York: William Wood & Co. 1868.

Among the most progressive and successful workers in the field of Laryngology must be placed Tobold. Identified from the very beginning with this depart-

ment of science, a work on the diseases of the throat from his pen must be received as a welcome contribution by the profession. When Tobold writes, we have not merely assertions introduced as *our experience*, but what is said is supported by facts which bear the impress of careful consideration and comparison.

Such was our conviction when in 1866 we read this treatise for the first time. Nor have we found cause to change our verdict, the oftener we have consulted its pages.

The first section the author has properly devoted to the histology and physiology of the larynx. In the second section the diseases of the mucous membrane and of the submucous tissue are discussed, classed under the collective name of Laryngitis Chronica Simplex. This is one of the most instructive portions of the work, though exceptions, perhaps well founded, have been taken to some of Tobold's observations on local treatment, the application of remedies with the sponge, and on inhalations.

Tobold recommends strongly the use of the sponge probang in preference to the brush. He favors the brush where distinct and circumscribed parts of the larynx are to be touched, but considers it insufficient where the entire interior of the larynx is to come under the action of the application. But we may well ask, how is a sponge probang to be introduced within the larynx in cases where the epiglottis is depressed and the open space is barely sufficient to enable us to introduce a brush? Again, will not the involuntary contractions that immediately follow the introduction of the remedy favor the diffusion of the same?

Our author would also confine the use of inhalations to certain affections of the trachea and bronchi only. That too much is expected and too much promised from this new therapeutic agent is but too true; but that the position taken by Tobold is untenable has been proved by Waldenburg and other continental experimenters.

We regret that our space does not permit us to enlarge upon the remaining sections of the work, as they are presented to us in *the original*.

Turning now to the translation before us, we hardly recognized the book so familiar to us. Let any one somewhat versed in the German language, compare a page of the original with the translation, and we are free to remark, it will soon be found that under the plea of a *free translation*, Tobold before us is no longer *the* Tobold as we find him in the German text. The German Doctor has been literally sandwiched between seventy-one pages of *our experience* in the beginning and twenty pages of *our experience* at the end of the translation. The climax is reached on page sixty-three, where the effects of electricity in the treatment of catarrh are described in the following language: "I usually apply electricity at the close of the visit, after the sponging and syringing are completed. The immediate effects are to quiet the irritation caused by the touching with the nitrate of silver, and the patient leaves the office in a comfortable frame of mind and body."

Now, to speak seriously, Dr. Beard must have been intent on playing a joke on his readers when he wrote the lines quoted. Could he ever for a moment have imagined that any sane reader would give such *experiences* any further credit, than to regard them as a bid for business among the timid and splenetic? It is useless to quote the opinions of such experts as Duchenne, Ziemsen, Benedict, Mayer, Althaus, to the contrary; these are men belonging to the *old dispensation*, who are just beginning to understand and to verify Dr. Beard's *experiences*.

We must yet allude to the translator's explanatory notes, added to the text not as foot-notes, as is customary, but interspersed directly in the text itself. Few as they fortunately are, we beg to assert that they are out of place. How Tobold will relish the *dessert of Clergymen's sore throat* added to his chapter on Dietic

Management, page 99, we do not venture to say. As the translator has refused to Dr. Tobold the courtesy, established by time, etiquette, and common consent, of not only having his own wishes regarded as to the translation of this or any other of his works, but to add also his own notes if such were needed, we must conclude that Dr. Beard must have overlooked on the reverse of the title page the line printed in legible letters: "*Das Rechte der Uebersetzung wird vorbehalten.*" We are aware that this reservation has been too often disregarded in this country, and that many American books are reprinted abroad without the permission of their authors. Repetition, however, can never make an act right which is essentially wrong, and the healthy sentiment which is growing up among nations in regard to this matter should be especially encouraged by all who pretend to a literary or scientific status.

ART. 3.—*Atlas of Venereal Diseases.* By A. CULLERIER, Surgeon to the Hôpital du Midi, etc. Translated from the French, with Notes and Additions, by Freeman J. Bumstead, M.D., Professor of Venereal Diseases in the College of Physicians and Surgeons, New York. Philadelphia: Henry C. Lea. 1868. 4to., pp. 140. With three chromo-lithographic plates.

We have looked with some interest for the appearance of this work, the first fasciculus of which is now offered to the public. That interest turned principally upon the fact that that the author and the editor belonged to different schools; Cullerier being an avowed unitist, while Bumstead, as is well known to all the profession in this country, is a decided dualist.

Now, to reconcile such conflicting opinions, or to convince one party or the other of error, is a difficult matter, and we are pleased, therefore, to see that the editor has not opened up the controversial gates, nor

availed himself of any large editorial license. He has contented himself with very brief but explicit refutations of the views which he believes incorrect, and shows that many of Cullerier's facts, properly interpreted, tell against himself. And moreover, in all this, he is not influenced by a partisan opposition, but he writes as one actuated by a spirit of scientific inquiry, and earnestly endeavoring to find out the truth, and the work he has here done was necessary, in our estimation, to counteract what we honestly believe to be erroneous and unfounded views.

The introduction is devoted to a development of the author's views of syphilis, and opens up with a chapter on the method of the study, showing the points especially necessary to be noted in the examination, and the usual sources of doubt and confusion. He attaches no value to auto-inoculation, and asserts that it is almost entirely abandoned as a means of study; but Dr. Bumstead very properly remarks, that this method is much used by modern venereal pathologists as a means of diagnosis in doubtful cases between the true chancre and the chancroid, and as such, it is an invaluable aid to our investigations.

Following this comes the historical sketch usually found in systematic treatises on venereal diseases. The author ranges himself on the side with those who admit that syphilis existed in ancient times, and his comments on the historical accounts he gives are such as might naturally be expected in a unitist.

Then, after a consideration of the virulence of the disease, the subject of contagion in its different bearings is discussed, and finally we have the questions of evolution, inheritance, and the pathological anatomy, brought out in more or less detail. This introduction may be considered a summary or condensation of the author's views, and will be read with much interest by those who are engaged in the study or practice of this class of diseases, however much they may be disposed to differ from his opinions.

The body of the book then opens with the subject of Blennorrhagia, but as in this fasciculus we have only the initial chapter, we shall postpone for the present any criticism thereon. We desire now especially to call the attention of the profession to the appearance of this magnificent work. The plates in chromo-lithography are most admirably executed, and compare very favorably in distinctness and brilliancy with the originals, as we know from personal examination. The appearance of the work in parts places it within the reach of all, and when completed it will be a most valuable accession to our literature.

ART. 4.—*On the Signs and Diseases of Pregnancy.* By THOMAS HAWKES TANNER, M.D., F.L.S., etc. From the second and enlarged London Edition, with four Colored Plates and Illustrations on Wood, Philadelphia: Henry C. Lea, 1868. 8vo., pp. 490.

Ten years have now elapsed since the appearance of the last edition of Dr. Montgomery's classical work on Signs of Pregnancy, and during that time much valuable material has accumulated, warranting new conclusions, and many points then in doubt have been satisfactorily solved. In some particulars it seemed that Dr. Montgomery's work was the ultimatum of knowledge, and no higher testimony to its value can be adduced than the almost entire unanimity with which obstetric authors have followed his descriptions. In the volume before us, Dr. Tanner constantly acknowledges his indebtedness to him, and makes very free use of his conclusions.

But Dr. Tanner's work has a different scope from Montgomery's, which was simply an exposition of the Signs of Pregnancy. It includes the various diseases of Pregnancy and their management. The Introductory Chapter, devoted to general observations on the State of Pregnancy, is a most felicitous and instructive

commentary on some of the more important conditions and questions relating to the state of pregnancy, and yet not directly connected with it. They are the limits of the generative faculty in women; the number of children a woman can bear, collectively and at a single labor; the most prolific age; the production of the sexes at will, and the prediction of the sex, wherein the impossibility of the first and the absurdity of the last are shown; the questions of feigned, concealed, unconscious and imaginary pregnancy, etc. In all this Dr. Tanner displays a wonderful research, as well as a most happy faculty of culling choice fragments and dropping them into the body of his narrative so as to bring out the best effect.

The body of the book then takes up the consideration of the main questions of the Signs and Diseases of Pregnancy. We have taken occasion to examine this part of the work most minutely, and to compare with it many scattered papers and monographs of recent date, and we find it contains about all the results arrived at that are worthy of record, and many other theories are introduced merely to show their unreliability. On some points we should be inclined to take issue with the author, but our limits do not permit a critical analysis of the book. We know positively the value of the work, and freely say that we may accept it in the main as the most reliable work in the language on the subjects of which it treats, and we advise the young student in obstetrics to learn from Dr. Tanner's book those portions of his study which are so clumsily and inadequately taught in most of the systematic treatises on obstetrics, and yet which are so important and essential a part of his knowledge.

A by no means unpleasant feature of Dr. Tanner's treatise is the ease and grace of his diction, and his rare facility in presenting his subjects in a most attractive form. Let one once begin the perusal of this book, and it will be found so captivating that it will not be laid aside till its contents have been mastered.

ART. 5.—*The Transactions of the American Medical Association, instituted 1847.* Vol. XVIII. Philadelphia: 1867. 8vo., pp. 551.

Our space will allow mention of only the chief papers in this volume of the Transactions.

Extra-Uterine Fœtation and Gestation, and the early signs which characterize it, etc., by Stephen Rogers, M.D., of New York. The author believes that in almost all cases of extra-uterine pregnancy, there is nearly a constant symptom present, whose importance has not hitherto been recognized by writers upon the subject, and which he values as "almost pathognomic," namely: "periodic, and more or less severe spasms of pain, usually described as colic, and referred to the hypogastric region, generally to the one or other side of the belly. If these colicky attacks be accompanied by sanguinolent and by occasional clotty discharges from the uterus, they are almost certainly indicative of extra-uterine pregnancy," (p. 92.) He thinks that in a very large majority of cases, the existence of this condition "may not only be suspected, but nearly positively determined, before the bleeding commences," (p. 101.) There being no hope of spontaneous recovery, the course of treatment to be adopted is considered, and the question of intervention discussed. Dr. Rogers is an advocate of early gastrotomy, and he grounds his hopes of saving the life of the woman by it: (1.) That it is an operation simple and attended with less risk than "many recognized and frequently performed operations involving the peritoneum and its cavity," (p. 124,) when done before the third month, as there can be at this time no, or only slight, adhesions of the cyst. (2.) That the peritoneum being healthy, the chances of subsequent serious inflammation are slight. (3.) That compared with herniotomy, tying the subclavian artery, and amputation of the thigh and hip-joint, there is "but little danger of doing harm; that there is a better

prognosis for it than for ovariectomy, and that it is a hopelessly fatal condition without it," (p. 122.)

Remarks on Heart Diseases, as observed in the Military Service, from 1861 to 1865, inclusive, by M. K. Taylor, M.D., of Iowa. The frequency of heart-disorder among the troops during the Rebellion, is notorious. While studying this subject, at the General Hospitals at Keokuk, Dr. Taylor's attention was called to the morbid conditions of the right side of the organ, and particularly to the structural changes in the right ventricle, by dilatation and thinning of its walls. In nine tenths of his cases, this state had been preceded by obstructive disease of the lungs, either mechanical or functional, an enfeebled condition of the muscular system, due to scurvy or malarial poisoning, a diseased state of the blood, owing to the same causes, and from "sudden and undue burdens imposed on the heart during rapid marches, or the overwhelming fatigues and excitement of battle." Though many cases were fatal, death happening suddenly, "a large majority of them regained a fair degree of health, and some have become very robust and retain scarcely any trace of their former trouble, (p. 145,) and this under such treatment as might restore tone to the system, as regulated exercises, fresh air, and sunlight, securing cheerfulness of temper, nourishing food, tonics, iron, and moderate alcoholic stimulation."

Dr. Joseph H. Hildreth, of Chicago, contributes a paper on the Action of Belladonna in Diseases of the Cornea; and Dr. James L. Little, of New York, has a Report on the Use of Plaster of Paris in Surgery, in which the advantages of this form of dressing after fractures and exsections are set forth by one who has had large experience with it.

Dr. B. Howard, of New York, gives a case of Varicose Veins of the Leg, treated successfully by ligation and depletion.

The Report of the Committee on Ligature of the Subclavian Artery, by Dr. Willard Parker, of New

York, is a valuable statistical contribution. One hundred and ninety-six cases are tabulated, with a mortality of 54.5 per cent., in 195 cases, the result in one not being given.

A Contribution to the History of the Hip-Joint Operations performed during the late Civil War, being the statistics of twenty cases of amputations and thirteen of resections at this articulation in the Southern service, by Paul F. Eve, M.D., of Nashville, will be read with much interest, in which a success of four in twenty cases of amputations, (one in five,) is claimed, and five in thirteen cases of resections, (one in two and a half.)

A statistical table on Lumbar Colotomy, (Amussat's operation,) for the relief of non-congenital intestinal obstruction, and of vesico-intestinal stricture, by Dr. George C. Blackman, of Cincinnati, is of real value, showing the results of the operation, its worth, and how justifiable is a resort to it—a practical point, well shown and illustrated by cases in Mr. Pemberton's "Clinical Illustrations of Cancer," just published, and in the sequel to Mr. T. Holmes's case, in the last volume of the Medico-Chirurgical Transactions.

A Report on Local Anæsthesia, by Dr. Krackowizer, of New York, and one on Epidemic Cholera, its causes, and means of its Prevention, are sketchy and unsatisfactory. The Report of the Committee on Medical Literature, by Dr. Alfred C. Post, is lamentably defective, nowise performing what its title promises.

Two Prize Essays finish the volume. The first, On the Cause of Intermittent and Remittent Fever, by Dr. J. R. Black, of Newark, Ohio, is a well-reasoned and plausible argument in support of the theory advocated—that the prevalence of autumnal fevers in this country is in direct ratio to the diurnal oscillations of temperature, there being a given mean temperature, namely, not less than 60° Fahr.

It is difficult to believe that the responsible officers of the Association would be willing to endorse the sur-

gical procedures set forth in the second essay, *On the Treatment of Certain Uterine Abnormities*, by Dr. Montrose Pallen, of St. Louis. We must, as a duty, simply enter the strongest protest against them, and warn the inexperienced gynæcologist, in the interest both of science and of humanity, not to attempt them. The adoption and promulgation of this paper, we look upon as the most serious error that has been made by the Association since its organization.

ART. 6.—*The Pathological Anatomy of the Female Sexual Organs*. By JULIUS M. KLOB, M.D., Professor at the University of Vienna. Translated from the German by JOSEPH KAMMERER, M.D., Physician to the German Hospital and Dispensary, New York, and BENJAMIN F. DAWSON, M.D., Assistant to the Chair of Obstetrics in the College of Physicians and Surgeons, New York. New York: Moorhead, Simpson & Bond, 1868. 8vo. pp. 299.

This is really the first volume of Dr. Klob's well-known work, and the disorders of the uterus are treated of. The anomalies of formation are first described. They are: 1st, those of Primary Development, altered (*a*) in quantity, including excess and arrests, and (*b*) in quality, as Congenital Anomalies of Form and Site; 2d, those of Uterine Development during childhood; and 3d, those of Formation in the latter [?] part of extra-uterine life. This last division includes the several changes of Site and Form of the Uterus, and the adventitious growths, innocent and malignant, developed in its tissues, that are met with at, and subsequent to, the period of puberty, and not alone in old age, as the title of the section would imply. The next chapter discusses the Anomalies of Nutrition, and which, like those of Formation, the author divides into two classes, according as the supply of nutritive material is increased or diminished.

“To consider inflammation among the quantitative alterations of nutrition, is open to some doubts, which I do not underrate, still, it will be admitted that true parenchymatous inflammation consists essentially of an abnormally increased nutritive process, and this may justify our classification. Under the head of Quantitative Alterations of Nutrition, hyperæmia is also considered, so far as an increased or diminished afflux of blood must exert some influence upon nutrition. As an immediate consequence of hyperæmia, hæmorrhage is the next to come under consideration. The results of qualitative alterations of nutrition in the uterus, are only known as fatty and amyloid degeneration.”—p. 212.

Metritis or acute parenchymatous inflammation of the uterus is a household word in the mouths of a large class of gynæcologists. On this subject Dr. Klob writes :

“Inflammation of the substance of the non-gravid uterus seems to be one of the rarest affections to which this organ is liable ; and if some uterine pathologists doubt the existence of such a disease, and explain the cases diagnosed as metritis as cases of perimetritis, pathological anatomy, considering the small number of semi-authenticated post-mortem cases, must pronounce upon it with some reservation. I have not met with a single case, which, with any degree of certainty, I could pronounce to be one of genuine metritis, and I therefore borrow the following description from other authors.”—p. 227.

This is certainly going too far, and we are surprised that Dr. Klob, with his large opportunities, has never met with cases of genuine acute inflammation of the substance of the womb ; but at the same time, the testimony is valuable, as showing the great rareness of a disorder, which, to judge from the language of writers and practitioners, is of daily happening, and which, perhaps, is never protopathic, but always the result of direct injury.

The so-called catarrhal disorders of the uterine cavity, acute, chronic, and croupy, are described, with an appendix on the "*dysmenorrhœic membrane*," of which Dr. Klob says:

"It is now clearly demonstrated that this membrane is nothing more than the exfoliation of the whole mucous membrane of the uterus, during menstrual intumescence, for it is easy to detect in it, with the aid of a microscope, the characteristics of that membrane."—p. 37.)

In the next section, Ulcerations of the uterus are treated of, and in the following one Wounds and Ruptures of the uterus.

Under the head of Qualitative Derangements of Nutrition, fatty and amyloid degenerations of the uterus are considered. The author states "that both these metamorphoses affect chiefly the muscular tissue of the uterus, while the connective tissue only slightly participates in such changes," (p. 254,) a proposition to which we might be inclined to take exception if we were writing other than an analytic summary of the work.

The concluding chapter is devoted to the Puerperal Affections of the uterus; and in the section on hæmorrhages of lying-in women, the *fibrinous polypus* of Kiwisch, and *intra-uterine placental polypus* of Braun, is described and discussed.

This volume is a well-known and compact manual on the subject of the morbid anatomy of the uterus, and we can recommend it to our readers. Drs. Kammerer and Dawson deserve the thanks of the profession for having undertaken its translation, and for the general accuracy of the execution. Some revision will be needed in another edition, and more careful correction of the proofs, which will tend to make the book easier reading, and secure it greater popularity.

ART. 7.—*Plastics ; a new Classification and Brief Exposition of Plastic Surgery.* By DAVID PRINCE, M.D. 8vo. pp., 92. Philadelphia: Lindsay and Blakiston. 1868.

This book is a reprint of a report on plastic surgery, from the transactions of the Illinois State Medical Society, 1867. It is intended as a monograph of the entire subject of plastic surgery. It presents in a convenient form the general and local therapeutics which need to be observed with special care in these cases, the prevalent views entertained respecting the advantages and disadvantages of anæsthetics, the different kinds of ligatures, and the subsequent dressings. A classification is then given of the methods of operating the division, consisting of six, with their varieties, each of which is fully described. The remainder of the book treats of the various plastic operations seriatim under their usual headings. Each operation is described, and its history given, much as in any text book on general surgery. Like any other compilation, it possesses the advantage of being very handy and convenient for reference in book form.

ART. 8.—*The Diseases of the Prostate; their Pathology and Treatment; Comprising the Jacksonian Prize Essay for the year 1860.* By Sir HENRY THOMPSON, F.R.C.S., Surgeon and Professor of Clinical Surgery to University College Hospital, etc. Third Edition. London: John Churchill & Sons. 1868. pp. 364.

This is a recent edition, improved by the very large and ripe experience of the author, of a work which we regard as the best monograph on this subject, if not on any other surgical subject in our language. It is replete with the results of industrious investigation and intelligent observations of daily practice, by a clear practical mind of unusual acuteness. Since Civiale's death, Sir Henry Thompson holds, without dispute,

the position of highest authority in all that relates to the surgery of the genito-urinary organs in Europe. It is to be regretted that his excellent work is not republished in this country. It should be within reach of every practising physician. There is no class of diseases for which art can do more, than those so intelligently treated of in this volume, and none in which neglect leads more certainly to painful and fatal results.

Reports on the Progress of Medicine.

THEORY AND PRACTICE OF MEDICINE.

Prepared by E. S. DUNSTER, M. D., Physician to the Out-door Department of Bellevue Hospital.

PHTHISIS PULMONALIS.

ART. I.—*The Nature of Tubercle.* [British Medical Journal, Nov. 2, 1867, and M. Chauffard, in Gazette des Hôpitaux, Oct. 17, 1867.]

THIS question underwent a full discussion at the recent International Medical Congress in Paris, and subsequently came up in the Academy of Medicine for debate. Two opposing opinions are now prevailing. One considers all the lesions of the tuberculous lung as dependent on tuberculosis; that these lesions have their seat in the intervesicular walls, or that they reside even in the interior of the vesicle. The other, the view generally adopted by the German pathologists, holds that tubercle exists exclusively in the wall of the vesicle; and the elements which fill the cell cavity are epithelial products of inflammatory origin, allied to what is called caseous pneumonia. M. Villemin ably supported the first doctrine. According to this view, the grey granulation and the matter of caseous pneumonia are equally tuberculous lesions; these elements, which are wrongly distinguished, both proceed from the cell nuclei which form part of the septum of the vesicles.

Those which accumulate in the cavities of the pulmonary alveoli owe to compression the flat surfaces which give them an epithelial aspect; but they are in reality formed of proliferous cells, rapidly undergoing fatty metamorphosis. M. Villemin rejects, besides, the doctrine of the specificity of tuberculous lesions. The granulations have their analogues in those of the syphilitic gummy deposits which have sometimes been confounded with them; and, moreover, the elements which constitute them have their physiological representatives in those of lymph and of the lymphoid tissues. In discussing the question of the inoculability of tubercle, M. Lebert declared that, by injecting into the veins of animals tuberculous products, and other morbid products, such as those of melanosis and carcinoma, or various substances, mercury and charcoal, he has produced embolism in the capillaries of the lung, and has seen inflammatory lesions supervene, of which some resemble those of tuberculosis. M. Berpet (of Cercoux) believed in the transmission of tubercle by respiratory exhalation. M. Seco y Valdor (of Madrid) related several cases he had observed of transmission of phthisis by cohabitation. M. Villemin's experiments, confirmed in most points by those of Mr. Simon and Dr. Marcet in England, are interesting from all points of view, but especially so from their tendency to throw once more into the arena the question of the nature of pulmonary tubercular disease. If it be true that the same condition can be induced in the lung by the inoculation into the tissues of charcoal, pus, mercury, what you please, as by the inoculation of tubercle, then this certainly would not indicate that tuberculosis is a specific, virulent, and inoculable disease, as was the first conclusion from these remarkable experiments.

The discussion at the Academy was opened by Dr. Chauffard in the elaborate address reported as above.

ART. 2.—*Tubercle in Man and the lower Animals.* By Dr. Edwards Crisp. [Med. Press and Circular, Dec. 25, 1867.]

An elaborate paper was read by Dr. Crisp to the St. Andrews Medical Graduates' Association. The following are his conclusions :

1. That the evidence we have at the present time does not warrant the assumption that tubercle in man is a contagious or zymotic disease.

2. That the above conclusion is strengthened by the abundant evidence we possess of its hereditary nature, and by the fact that, with the exception of syphilis, no zymotic disease, or tendency to disease, is transmissible from parent to child.

3. That all zymotic diseases observe certain phases of progress and decline.

4. That ordinary pulmonary tubercle is of uncertain duration, and may often be arrested in its early stage by change of climate and by medicinal and hygienic measures.

5. That tubercular deposit may be produced in man and in the lower animals, (mammals, birds, and reptiles,) by a vitiated atmosphere, bad diet, a change of temperature, and other unnatural conditions.

6. That all deposits or growths of tubercle in man and in the lower animals, (whether miliary or caseous,) are preceded by an inflammatory or hyperæmic condition, and that as far as my examinations have gone they commence generally in the connective tissue of the air-cells.

7. That tubercular affections in the lower animals (mammals, birds, and reptiles) in confinement are very common, as shown by the numerous preparations and drawings exhibited, and that they differ materially in their nature and seat from those in the human subject.

8. That in the inferior animals the liver and spleen, as well as the lungs, are often affected, while in man, the disease in the two former viscera is comparatively rare.

9. That this deposit in the lower animals, especially in birds, is of a more uniform shape, of a more solid consistence, and contains a large amount of cretaceous matter; that large cavities are but rarely met with in the lungs, and that bloody, purulent, cutaneous and other exhaustive discharges, are absent.

10. That as I stated many years since, many specimens of tubercle in the lower animals, as in the examples of rabbits and sheep on the table, have a verminous origin.

11. That I have met with many instances in the inferior animals showing the hereditary nature of tubercle.

12. That the production of tubercle, or something allied to it, in the rabbit by inoculation, requires to be tested by a larger and more varied amount of experiment, before we can arrive at positive conclusions.

13. That, looking to the evidence I have given respecting the supposed origin of some cases of tubercular peritonitis, the effects produced by inoculation, and especially to the fact that one form of tubercle, as I believe, in the serpent is contagious, it behoves me to speak somewhat guardedly respecting the non-contagious nature of this disease in man. That the question is one that yet requires much patient labor and research.

ART. 3.—*On the Influence of Narrowing of the Pulmonary Orifice on the Formation of Pulmonary Tubercles.* By M. LEBERT. [Gazette Medicale de Paris and Medical Press and Circular, November 13, 1867.]

The author, in the course of his researches on mechanical influences in the etiology of tuberculous affections, has been struck by the frequency of the occurrence of pulmonary tubercle in cases of congenital narrowing, either of the cone or the orifice of the pulmonary artery.

This coincidence has been observed, in isolated cases, by Favre, Travers, Gregory, Louis, and Grevelde, and during the last twenty years it has been noticed in one third of the observed cases, often under circumstances in which no other etiological element of tuberculization could be supposed to exist. The author has been able to collect twenty-four facts of this kind, a large number if the relative rarity of this affection be taken into account. The frequent development of tubercles in connection with this condition is the more striking, as nothing is more rare than to meet with pulmonary tubercles in alterations of the orifices of the left heart. Three forms of congenital narrowing of the pulmonary artery are to be distinguished—primitive narrowness of the vessel, which is furnished only with two valves, narrowing of the pulmonary arterial cone, and narrowing of the orifice. The last two are the results of endocarditis or myocarditis, and as ordinarily the interventricular septum is deficient, this inflammation must take place before the end of the third month of intra-uterine life. The foramen ovale remains often also open, the arterial duct more rarely. Hence, the circulation through the lungs is irregular and incomplete. Dilatation of the bronchial, œsophagean, and coronary arteries of the heart, also of the subclavian, furnishes only an incomplete collateral circulation, whence arises imperfect nutrition of the lungs, so that they are observed to be small and incompletely developed. This irregular, unequal, incomplete circulation in places, gives rise to pulmonary tubercle, while the most intense and extended pulmonary hyperæmia from alteration of the bicuspid and tricuspid orifices does not conduce to its development. The author knows neither age nor disease which presents this proportion, i. e., of one third affected with pulmonary tubercle, and hence he can only refer it to pulmonary stenosis. The character of the tubercular attack is protracted, progressive, and fatal. Hæmoptysis is frequent, and it is ordinarily the left lung that is first attacked, and not the right,

which the author thinks is the lung which ordinarily suffers first. The anatomical characters are the same as in other forms of tuberculization.

ART. 4.—*On the Treatment of Pulmonary Consumption.*
By J. HENRY BENNET, M.D. [British Medical Journal, October 26, 1867.]

This paper was read by Dr. Bennet at the meeting of the British Medical Association in Dublin, August, 1867. It is a valuable summary of the best accepted views on this subject, and it is needless for us to say but little importance is attached to medication *per se*. Dr. Bennet has had peculiar opportunities for studying and treating this disease, and being himself a consumptive invalid, whose life has been prolonged many years by careful hygienic and climatic influences, his testimony possesses an uncommon value. The paper is too lengthy for transfer to our columns, nor will it bear condensation.

ART. 5.—*The Nature and Mode of the Propagation of Phthisis.* By WILLIAM BUDD, M.D. [Lancet, October 12, 1867.]

The Nature and the Mode of the Propagation of Consumption. By RICHARD PAYNE COTTON, M.D. [Lancet, November 2, 1867.]

Dr. Budd's claims are so startling that we must in justice give his exact words. He says:

The following are the principal conclusions to which I have been led regarding Phthisis or Tubercle:

1st. That tubercle is a true zymotic disease of specific nature, in the same sense as typhoid fever, scarlet fever, typhus, syphilis, etc., are.

2d. That, like these diseases, tubercle never origin-

ates spontaneously, but is perpetuated solely by the law of continuous succession.

3d. That the tuberculous matter itself is (or includes) the specific morbid matter of the disease, and constitutes the material by which phthisis is propagated from one person to another, and disseminated through society.

4th. That the deposits of this matter are, therefore, of the nature of an eruption, and bear the same relation to the disease, phthisis, as the "yellow matter" of typhoid fever, for instance, bears to typhoid fever.

5th. That by the destruction of this matter on its issue from the body, by means of proper chemicals or otherwise, seconded by good sanitary conditions, there is reason to hope that we may, eventually, and possibly at no very distant time, rid ourselves entirely of this fatal scourge.

The evidence on which these conclusions are founded is drawn from the following principal sources :

(a) Considerations based on the pathology of phthisis, as showing it to consist in the evolution and multiplication within the organism of a specific morbid matter, with a universal tendency to elimination and casting forth of the same, after the type of zymotic diseases generally.

(b) Actual instances in which there was evidence to show that phthisis was communicated from one person to another.

(c) The geographical distribution of phthisis in past and present times, and, especially, its great fatality now in countries which when first discovered by Europeans were known to be entirely free from it.

(d) Its much greater prevalence in low levels and among crowded communities, and its entire absence, unless by casual importation, at very high levels; conditions which are well known to rule, in the same directions, the spread of zymotic diseases generally, and especially of that group in which, as in phthisis, the morbid matter is cast off in a liquid form.

(e) Its very high rate of prevalence in convents, harems, barracks, penitentiaries, etc.; that is to say, under the very social conditions which are known most to favor the propagation of diseases of the zymotic group.

Among the data relating to geographical distribution the following striking facts may be here mentioned :

1st. When the South Sea Islands were first discovered phthisis did not exist there. Since the Aborigines have come into intimate contact with Europeans, the disease has not only made its appearance among them, but has become so wide-spread as to threaten their extermination.

The contrast between original entire immunity and present extreme fatality is very striking, and can only be rationally explained by the importation of a new and specific morbid germ.

Try every other supposition, and the facts are inexplicable ; make this one supposition, and they are at once explained.

2d. The late Dr. Rush, of Philadelphia, who made very accurate inquiries to determine the point, satisfied himself that when America was first discovered, phthisis was unknown among the native American Indians. Now it is very fatal to them.

The very significant contrast here exhibited between the past and present history of these two races, in respect of phthisis, is exhibited at once, and at the present time, among the negro race in Africa, in different parts of the area of that great continent.

It is well known that negroes are peculiarly liable to phthisis.

Now, everywhere along the African sea-board where the blacks have come into constant and intimate relations with the whites, phthisis causes a large mortality among them. In the interior, where intercourse with the whites has been limited to casual contact with a few great travelers or other adventurous visitors, there is reason to believe that phthisis does not exist. Dr.

Livingstone and other African travelers have given me the most positive assurances on this point.

The idea that phthisis is a self-propagated zymotic disease, and that all the leading phenomena of its distribution may be explained by supposing that it is disseminated through society by specific germs contained in the tuberculous matter cast off by persons already suffering from the disease, first came into my mind, unbidden, so to speak, while I was walking on the Observatory hill, at Clifton, in the second week of August, 1856. The close analogy in many quite fundamental points between this disease and typhoid fever had often impressed itself on me with very great force while I was engaged in the study of the latter, and in the preparation of the papers which I have published on it. I now saw with a clearness which had never occurred to me before, that, with the exception of the qualifications necessary for their application to a chronic disease—for the most part of slow evolution and indefinite duration—the leading conclusions to which I had been led respecting the propagation of the fever, might be applied with the same strictness to phthisis also.

This idea had no sooner taken possession of my mind than considerations of great force and in overwhelming number crowded upon me in illustration of it.

In the course of the same evening I drew up some notes on the subject, and before the end of the month my views upon it had taken, in outline, the exact shape which they now have. The long interval which has occurred between the summer of 1856 and the present date has been occupied in collecting data bearing on the various questions raised by this new theory, in accumulating evidence of various kinds, and in examining and carefully weighing difficulties. During the whole of this long time the subject has scarcely ever been absent from my mind. The result has been only to confirm me more and more in the truth of my first conclusions. I earnestly hope that they will not be lightly rejected. At any rate, I can say that they have not been brought

forward in haste or without due deliberation. I have, in fact, considerably exceeded the ten years, which, with a fine sense of what is due to such an enterprise, the Roman poet prescribed as the time to be given to every composition intended by the writer to endure.

Many causes have helped to prevent me from giving my views on this subject sooner to the world. Chief among them I may name want of time to put them into that scientific form, and clear logical order, under which alone an innovation so daring has any chance of being entertained, much more of being accepted, by the profession. This task, however, I hope to complete in the course of a few months.

This communication of Dr. Budd's has called forth from Dr. Cotton, who is one of the physicians to the Brompton Hospital (for consumptives), a prompt and powerful rejoinder. Admitting that the subject as well from its source as its novelty demands the gravest consideration, he says :

“ If such views be correct, they will completely revolutionize both the medical and social treatment of consumption ; they will make the poor consumptive sufferer a being as much to be dreaded as the leper of old ; and they will at once crush every hope of our lessening the ravages of this terrible scourge, by the manifest impossibility of our ever being able to ‘stamp out’ so universally prevalent a poison. If Dr. Budd's views be incorrect, the interests of both the consumptive and the healthy require that they should be proved to be so.

“ Continued and very anxious thought upon this subject, based, too, upon an unusual amount of personal observation, has long ago brought me to a conclusion directly opposed to that of Dr. William Budd. The more I see of consumption the more am I convinced that its lamentable prevalence is to be ascribed to causes very different from that which he suggests. I have never met with a case of true pulmonary consumption, however apparently due to contagious influence—

and that such cases often present themselves I readily admit—which could not be more easily accounted for upon generally recognized causes than upon specific and contagious influences.

“The subject is a very comprehensive one, and its due consideration greatly exceeds both the space I can expect in the pages of *The Lancet*, and the time which I have at present at my command. Following the example of Dr. William Budd, I must content myself with briefly stating my own conclusions, reserving for some future communication the grounds upon which such conclusions have been formed.

“First. I believe phthisis to be a purely constitutional disease, which may be either inherited or acquired, but which is incapable of being communicated by one person to another *in the ordinary sense of a contagious disease*.*

“Second. I regard tubercle as the product of such constitutional disease, just as lithate of soda is of gout, and sugar of diabetes.

“Third. I consider that a person may be really consumptive, or, in other words, may have this constitutional disease, while the tuberculous elements are still in the blood, that is to say, before they are deposited as tubercle in the lung or other tissues.

“Fourth. Although I think it very possible that tuberculous matter, like many other diseased products, may be introduced into the system by artificial inoculation, producing its like, or something more or less similar to it, I do not believe that tubercle can exist naturally in such a state as to be, as Dr. Budd expresses it, ‘disseminated through society’ *by the ordinary principle of contagion*.

“Fifth. I think it probable, although at present not perhaps quite demonstrable, that there are varieties of

* It is not impossible that, under certain circumstances, into which I cannot now enter, but which do not affect the question nor give any support to Dr. Budd's views, this constitutional condition may be conveyed from husband to wife, and, perhaps, but with less probability, *vice versa*.

consumption, both in degree and kind; but I am unacquainted with any such variety forming an exception to the general principles which I have stated above."

Now if Dr. Budd's views be correct, hospitals for consumptives ought to be nothing more or less than pest houses, and to afford abundant proofs of their inutility and injuriousness. But Dr. Cotton thinks that the facts show quite the reverse, and he supplements his paper by a letter from Mr. Edwards, for seventeen years the Resident Physician at Brompton Hospital, summing up the history of the officers and attachés of that institution during that period, in which time no less than 15,262 in-patients and 102,369 out-patients were under treatment. There certainly is no evidence in support of the view of the communicability of the disease.

ART. 6.—*Histological Affinity of Tubercle and Fibroid Degeneration.* By H. C. BASTIAN, M.D. [British Medical Journal, December 21, 1867.]

At the present time, when the questions of tubercle and tuberculosis are attracting so much attention, any attempt to arrive at greater precision regarding the actual histological elements of tubercle, will be looked upon with interest. Professor Bastian, in common with many other pathologists, considers the grey granulations, met with in acute tuberculosis, as the type of tubercle, and that these bodies which were first described by Bayle and regarded as distinct from tubercle, are in reality the only morbid products deserving that name. He thinks, however, that under the microscope these grey tubercular granulations are indistinguishable from those met with in the early stages of fibroid degeneration, and at the meeting of the Pathological Society before which his paper was read, exhibited specimens of both these morbid conditions, taken from various organs of the body.

Tubercle, it is sufficient to say, has a fibro-nuclear structure, and on examination of transverse sections a number of spherical or ovoidal nuclei may be seen (of a diameter a little less than a blood corpuscle) situated between the meshes of a delicate fibrous network. The nuclei contain mostly a few granules and one or two larger dots or nucleoli. Here and there cells are seen, within each of which is contained a nucleus similar to those just described. A smaller number of nuclei are met with having a more elongated or oat-like shape, and these occur principally in the vicinity of the more abundant fibre-tissue. The more or less spherical nuclei, however, are far more abundant than either of the other cellular or nuclear forms.

Now precisely this same description suffices for the early stage of fibroid degeneration; but notwithstanding this histological identity of the elements in these two products, there is no difficulty, Professor Bastian claims, in distinguishing between the two. They are distinct in their etiology, their ultimate fate, or the changes they undergo, and their obvious anatomical characters and distribution. 1st. Etiology. Tubercle is the anatomical index of a grave constitutional disorder, while fibroid substitutions seem, in a great majority of cases, to be mere local changes, and even in those instances where it is connected with some peculiar diathesis and manifests itself in various organs of the body at one and the same time, that diathesis is certainly not the tubercular. 2d. Tubercle in the form of miliary tumors, has a strong tendency to undergo fatty degeneration and disintegration, which, beginning in the more internal elements of each of the component nodules, has a tendency to spread outwards and involve the whole mass, while with the fibroid substitution, the fibro-nuclear structure has only a temporary duration, and is destined to be replaced by a more purely fibre-tissue with coincident diminution of bulk in the organ. 3d, and lastly. Tubercle appears in little rounded masses, whose size rarely exceeds that of a hempseed,

and each of these apparently formed from several separate centres, so that on section we have a tumor whose elements are more or less concentrically arranged around several centres. This concentric arrangement is frequently absent in fibroid degeneration, and never so well marked as in tubercle, and moreover, when this fibroid substitution commences, the new tissue oftentimes proceeds continuously in different directions, and has no tendency to produce rounded masses like tubercle.

Dr. Bastian thinks that a number of pathological conditions which have been described under different names, as, namely, the gray tubercular infiltration of Laennec and the chronic pneumonia of Chomel and later writers, are in reality only fibroid degeneration reaching its extremest degree in the "Cirrhosis of the Lung" of Sir Dominic Corrigan. The fibroid substitution may, however, coexist in the tubercle, and then it is conservative in its nature and antagonistic to the destructive action of the primary products of disease, i. e., the tubercle, while existing alone it is more frequently aggressive and may destroy a whole organ.

ART. 7.—*The Geographical Distribution of Phthisis.*
[Editorial Med. Times and Gazette, Dec. 14, 1867.]

A recent number of the Journal de la Société de Statistique de Paris contains an article by Dr. Gross of Berne on this subject, which has a peculiar interest for the profession at the present time, when every question relating to tubercle and its manifestations is attracting so much attention.

Dr. Gross's geographical sketch satisfies him that climate alone, so far as it is measured by the mean temperature, exercises little influence on the development of tuberculosis; and further, that the notion that the disease diminishes in frequency from the poles to the

equator, seems to be directly the converse of the truth. But there is an atmospheric element which does exercise an unfavorable influence in respect of the prevalence of phthisis, and that is, humidity. Nearly all the countries and localities in which phthisis has been noted as frequent are distinguished more or less by great humidity, while those which are free from disease have generally a very dry atmosphere, either by reason of their great elevation, or by great degrees of cold. American observations go to show that a dry air, in conjunction with a temperature not subject to much fluctuation, are conditions least favorable to the spread of the phthisis, and that a temperature equal and *low* is preferable to a temperature equal and *high*. The reasons for the rarity of phthisis upon elevated plateaux are thus given: "La pression atmosphérique étant moindre, les inspirations en deviennent plus profondes, le sang se répand avec plus de vigueur dans les poumons; de là une dilatation de ces organes et de la poitrine; l'air tonique et vivifiant des montagnes favorise la nutrition etc. Si l'air y contient un peu moins d'oxygène, l'ozone s'y trouve en plus grande quantité. Ne serait-il pas permis d'attribuer à cet air ozonisé une influence bienfaisante sur la maladie qui nous occupe? C'est l'électricité qui exerce l'influence principale sur la production de l'ozone, et sur les montagnes elle doit généralement être de l'électricité positive, selon les recherches de Werber."

Dr. Gross cites the names of Gastaldi, Fuchs, Jourdanet, Mühri, Lombard, Guilbert, Werber, and Schnepf, as authorities for the immunity of high elevations from tuberculosis. Lombard states that, although phthisis is common in the low valleys and middle regions of the Alps, it becomes more and more rare in the elevated parts so that between one thousand and one thousand two hundred metres a few isolated cases are found, and from one thousand two hundred to one thousand five hundred metres it disappears entirely. The phthisical zone above and below which diseases of the chest

diminish in frequency, is given approximately as extending from four hundred or five hundred to one thousand or one thousand two hundred metres. Dr. Gross, speaking from his own experience of military service in the Bernese district of Gessnay, has had during the last ten years but three cases of exemption on the ground of confirmed phthisis, and two from suspicion of tubercle; the population of the district is four thousand nine hundred and six, and the men called for service are mostly between twenty and twenty-one years of age.

Dr. Gross asks if, as the corollary of the propositions of which we have given an indication, it is not a legitimate conclusion that immunity from phthisis must be sought rather in very cold and very elevated localities than in warm countries. To the objection that in these more bracing situations the weak and delicate are carried off by other complaints before phthisis has had time to develop itself, Dr. Gross answers that if this were so, it could not upset the logic of rigorously observed facts which not only show that phthisis is rare in these altitudes, but that patients with incipient organic disease of the lungs recover their health under the influence of the drier and more ozonised atmosphere.

In the *Varia* for this number, we give from the same source some of the facts brought forward by Dr. Gross relative to the distribution of phthisis.

ART. 8.—*On the Inoculation of Animals as a Means of Diagnosis in Tubercular Phthisis.* By Dr. William Marcet. [Medical Times and Gazette, September 28, 1867.]

Dr. Marcet read a paper on this subject at the meeting of the Royal Medical and Chirurgical Society of June 25. He details a long series of experiments performed by himself, and substantiating Villemin's discovery that tubercular phthisis can be inoculated from man to ani-

mals. His experiments and inoculations were mostly confined to the expectorations of phthisical patients, and he believes himself warranted in submitting the following conclusions:

1st. The inoculation of guinea-pigs with the expectorations of patients suffering from phthisis will, at all events in a certain stage of the disease, and possibly throughout, give rise to the formation of tubercles in the operated animals. 2nd. If two or more guinea-pigs inoculated with human expectorations, brought up by coughing, should die from tubercular disease, or should on being killed at least thirty days after inoculation, exhibit tubercles, this may be considered as a direct and positive evidence that the person whose expectorations were inoculated was suffering at the time from tubercular phthisis. 3rd. If two or more guinea-pigs be inoculated with the expectorations coughed up by a person considered to be in the third stage of phthisis, and if these animals do not die of tubercular disease, or exhibit any tubercles when killed at least fifty days after the inoculation, it may be considered that in the present case the softening of tubercles and the secretion from the pulmonary cavities are arrested, the patient being in a fair way of recovery. 4th. Other materials beside the pulmonary expectorations, taken from the human body in certain if not in all stages of phthisis, as blood and pus, appear to be also possessed of the power of causing the formation of tubercles in guinea-pigs when inoculated to these animals. 5th. The spleen appears to be the first, and the lungs one of the last organs in guinea-pigs to be attacked with tubercular disease.

ART. 9.—*The Inoculation of Tubercle.* [Ed. Medical Times and Gazette, Nov. 23, 1867.]

During the discussion which is taking place at the Académie de Médecine on M. Villemain's paper on the "Inoculation of Tubercle," M. Piorry has just read a

paper which he terminates with the following conclusions: 1. The facts relating to the reproduction of tubercle consecutively to the introduction into the connective tissue, and other parts of the economy, of granular and tubercular matter, are no doubt of great interest; but they present the most complete analogy with those which have already been collected concerning the spontaneous or induced inoculation of pus in the different tissues and organs, or into the blood of man or animals. 2. The cause of such analogy arises from the fact that tubercular matter would seem to be nothing else than pus which has undergone, as a consequence of its sojourn in the organs, numerous and varied modifications. 3. Not only pus, but also the serum of blood, and the blood, which undergo no organization, deposited in the cavities, in the connective tissue, in the pulmonary cells, and the bronchi, may become foreign bodies, and give rise to grey granulations, and provoke the secretion of purulent products likewise susceptible of assuming the tubercular form. 4. If the facts observed by M. Villemin are to be regarded as inoculations because the tubercular matter or the granulations are reproduced in the lungs, the membranes, and the vascular and bronchial surfaces, we must also regard as inoculations the analogous phenomena which are found to result from the introduction of pus into the vascular orifices. 5. In these experiments it is not the inoculation and reproduction of a miasma or a virus which takes place, but the penetration of pus into the vessels, and its deposit, molecule by molecule, in the tissues. Such pus there undergoes alterations, becomes desiccated and modified, and induces by its presence the secretion and deposit of new pus, the appearance and consistency of which vary according to the more or less acute manner in which such phenomena are accomplished. Among the appearances which such pus may assume, should be especially noted the tubercular and granular forms ensuing on the chronic condition. 6. The importance of the distinction between the inoculation of a

virus and the penetration of pus is great; for, while the contagion of a virus or a miasma is possible and observable, this cannot be stated with regard to the penetration of purulent or tubercular molecules into the tissues or blood vessels. 7. To maintain the identity of these two orders of facts is entirely to pervert the terms "inoculation" and "contagion" from their ordinary acceptation. 8. Nothing is more certain and more logical than the possibility of annihilating a virus by the introduction into the circulation of a special virulent agent; but nothing can be more absurd, dangerous, and blamable than the introduction of pus or tubercular matter into the system of a man not the subject of pyæmia or tubercle, with the intention of preventing his future liability to such altered condition of the blood and its usual organic consequences.

ART. 10.—*The Therapeutics of Pulmonary Consumption. A Clinical Lecture at the Lariboisière.* By Dr. Hérard. [British Medical Journal, Aug. 10, 1867.]

Dr. Hérard's lectures on Consumption conclude with an admirable resumé on the subject of therapeutics. He reduces the indications of treatment to three.

1. The prevention of the development of miliary granulations.

2. To combat the congestions and inflammations of the pulmonary parenchyma.

3. To combat local or general symptoms which become predominant, painful, or distressing to the patient.

Under each of these indications, Dr. H. discusses the different means for treatment. There is, of course, nothing new, but his estimate of the value of special remedies and plans of treatment is very judicious. To medication proper, he attaches a higher importance than does Dr. Bennet, but, at the same time, he insists upon the necessity of a strict compliance with hygienic

treatment, both "alimentary" and "respiratory" as he is pleased to classify it.

ART. II.—*On the Action of Arsenic in Phthisis.* [Lancet, Jan. 25, 1868.]

M. Moutard-Martin, one of the physicians of the Hôpital Beaujou, has been making interesting experiments on the action of arsenic in phthisis, the results of which he sums up as follows: 1. The action of the substance is undeniable. 2. It is particularly efficacious when phthisis assumes a slow and torpid course. 3. Acute tuberculosis is in no way modified by its employment. 4. In a great number of cases, even when phthisis is far advanced and attended with hectic fever, the general state of the patient is favorably modified, at least during a certain time. 5. Local lesions are modified more slowly. 6. Success in a certain number of cases must be attributed to the use of the remedy. There would be a greater number of successful cases if the patients persevered in the employment of arsenic. 7. In order to be efficacious the treatment must be protracted. 8. The doses must be extremely small. 9. It is not necessary to give more than two centigrammes per diem. 10. Contrary to the opinion of certain writers, arsenic is better tolerated by patients who are in the early stages of disease than by those who have reached the period of consumption. 11. When the doses are kept within the limits of fifteen milligrammes to two centigrammes, tolerance becomes indefinite, so to say. 12. Arsenic especially exercises a reconstituting action, and modifies secondarily the pulmonary lesion. Certain facts, however, prove that arsenic possesses a direct action over the respiratory functions; it may exercise an influence on the pulmonary tissue itself and on the tubercle.

Recent Publications on this Subject.

- On Diseases of the Lungs and Air-passages; their Pathology, Physical Diagnosis, Diagnosis, Symptoms and Treatment. By Henry William Fuller, M.D., Cantab. London, John Churchill & Sons, 1867.
[Republished in this country by Henry C. Lea, Philadelphia.]
- Change of Air Considered with Regard to Atmospheric Pressure in the Treatment of Consumptive Chronic Diseases. By J. C. Atkinson, M.D. London: Trubner & Co. 1867.
[See this Journal, August, 1867, page 423.]
- On the True First Stage of Consumption. By Horace Dobell, M.D. London: John Churchill & Sons, 1867.
- Physiological Remarks upon the Causes of Consumption. By Valentine Duke, M.D. Dublin: Fannin & Co., 1867.
- On the Treatment of Pulmonary Consumption by Hygienic Climate and Medicine. By J. Henry Bennett, M.D. London: John Churchill & Sons, 1866.
[An extension of Dr. Bennet's views noted above.]
- On the Treatment of Consumption, with Notices of Successful and Unsuccessful Cases. By Charles Thomason Thompson, M.D. London: Robert Hardwicke, 1867.
- Consumption as engendered by Re-breathed Air, etc. Its Prevention and possible Cure. By Henry MacCormac, M.D. London: Longmans, Green & Longman, 2nd Edition, 1867.
- Recherches sur l'Inoculabilité de la Phthisie pulmonaire. Par M. le Dr. A. Rosteur. Paris, 1867.
- Egypt and the Nile, as a Winter Resort for Pulmonary and other Invalids. By John Patterson, M.D. London: John Churchill & Sons, 1867.
[See the Journal for January, 1868, p. 342.]
- On the Nature and Affinities of Tubercle; being the Gulstonian Lectures for 1867. By Reginald Southey, M.D., Oxon, etc. London: Longmans & Co., 1867.
- Phthisis and the Stethoscope, or the Physical Signs of Consumption. By Richard Payne Cotton, M.D. 3rd Edition. London: John Churchill & Sons, 1867.
- Etudes sur la Tuberculose. Preuves Rationnelles Experimentales de sa Spécificité et de son Inoculabilité. Par J. S. Villemin. Paris: J. B. Baillière et Fils, 1868.
- Felix von Niemeyer's Clinical Lectures on Pulmonary Phthisis. Translated from the German by J. L. Parke. New York: Moorhead, Simpson & Bond, 1868.
- Consumption in New England and elsewhere, or Soil Moisture one of its Chief Causes. Address delivered before the Massachusetts Medical Society. By Henry J. Bowditch. Boston: David Clapp & Son, 1868.
- On some Sources of Fallacy in the Diagnosis of Phthisis. By W. T. Wade, M.B. Lancet, December 7, 1867.

CHOREA.

ART. 12.—*Remarks on Maniacal Chorea and its probable Connection with Embolism.* By H. M. Tuckwell, M.D. Oxon. [British and Foreign Med. Chir. Review, Oct., 1867.]

A case terminating fatally, the post-mortem appearances of which are reported with great minuteness. Dr. T. thinks that the conclusions which in the present state of our knowledge may be fairly drawn, are

First. That in death from chorea, the presence of warty vegetations on the mitral or aortic valves is the rule.

Second. That these vegetations may be set free and carried as emboli to the different organs of the body.

Third. That the brain is often found softened ; and that this softening may certainly, in some instances, be attributed to plugging of the cerebral arteries.

Fourth. That the spinal cord is not uncommonly found softened, and that this softening may, in all probability, be in like manner attributed to plugging of the spinal arteries.

Fifth. That a cardiac murmur may not be heard even though the valves be seriously diseased ; and that consequently certain cases of chorea attributed to pregnancy, fright, worms, etc., can be really due to the presence of vegetations on the cardiac valves.

Sixth. That the recent investigations into the morbid anatomy of chorea warrant the suspicion that this disease may, at least in its severe forms, depend directly on irritation or softening of the great nerve centres, induced by the presence of emboli in the blood vessels of those centres.

ART. 13.—*Remarks on Chorea Sancti Viti, including the History, Course and Termination of Sixteen Fatal Cases, and also Certain Details of Out-patient and other Cases which were not fatal.* By John W. Ogle, M.D. [British and Foreign Med. Chir. Review, Jan., 1868.]

An unusually valuable contribution to the statistics and pathology of this curious affection. The prominent complications and post-mortem appearances in each case were,

Case 1. Fright ; pregnancy ; congestive pia mater, brain, and inter-vertebral veins ; cord healthy ; fibrinous deposits on the tricuspid valves.

Case 2. Congestion of the brain, posterior vertebral

veins, and substance of cord ; unusual amount of fæcal accumulation in and adherent to intestines.

Case 3. Third attack ; diseased clavicles ; congestion of inter-vertebral veins, cord otherwise healthy ; fibrinous deposits on mitral valves ; fæces adherent to colon.

Case 4. Congestion of brain, membranes healthy, fibrinous deposits on mitral valve.

Case 5. Fright ; areolar tissue ; inflammation and erysipelas ; abscess mediastinum and empyema ; brain and cord healthy.

Case 6. Liability to rheumatic fever ; congestion brain ; cord softened and broken down ; old pericarditis, fibrinous deposit on left auriculo-ventricular opening.

Case 7. Hysteria ; brain and heart healthy ; cord apparently softened.

Case 8. Fright ; abscess beneath integument ; brain, cord, and heart natural.

Case 9. Coma and convulsions following an attack of scarlet (?) fever ; plugging of the carotid artery by fibrin ; no fibrinous deposit found in heart, but may have existed during life and been removed.

Case 10. Scarlet (? rheumatic) fever ; congestion brain ; fibrinous deposits on mitral valve ; recent pericarditis.

Case 11. Previous rheumatic fever and epilepsy ; mania ; congestion brain, uterus, and ovaries ; fibrinous deposit and thickening mitral valve.

Case 12. Fright ; congestion brain and substance and membranes of cord ; fibrinous deposit mitral and aortic valves.

Case 13. Fright ; choreic movements under partial voluntary control ; congestion dura mater and brain and cord.

Case 14. Congestion brain and altered state of substance of cord ; beads of fibrin on mitral valve.

Case 15. Maniacal chorea ; pregnancy ; intestinal worms ; congestion and softening of the brain and cord ; recent fibrinous deposit on mitral valves with slight thickening.

Case 16. Sudden congestion of lungs; pericardial effusion; beads of soft recent fibrin forming ring around mitral orifice, and also in right auriculo-ventricular aperture; no congestive nervous centres.

As to sex, 14 of the 16 cases were females.

As to age, the disease was present on an average at a more advanced period of life than is usually assigned to it; two only being under ten years of age, eleven between ten and twenty years of age, and three above twenty.

The duration of the disease was on the whole short; in one case possibly seven months, in another six months, in two others three months, one of nine weeks, one of six weeks, two of three weeks, one of two weeks, three of ten days, and one of eight days.

Previous attacks are recorded in only three cases.

As regards the important complications and pathological appearances, the above statement of each case furnishes information. It will be seen that these cases bear out in a very positive manner some of Dr Tuckwell's conclusions above given. Dr. Ogle, however, for reasons given at length in this paper, is disposed to take exception to Dr. Tuckwell's view of the causation of chorea (sixth conclusion *ut supra*) and insists that even if fibrinous deposits in the heart were found in every case something more than embolism is necessary to produce the disease, and he is inclined to look upon this post-mortem condition as a result of some antecedent general condition of the blood common to chorea.

Dr. Ogle's paper is to be continued and to include non-fatal cases of chorea.

ART. 14.—*Treatment of Chorea by General Electrization.*

By A. D. Rockwell, M.D. [Medical Gazette, Dec. 14 and 21, 1868.]

Dr. Rockwell's paper on this subject was read before the New York Medical Journal Association, and is

terminated with the following rather indefinite conclusions:

1st. That general electrization with the Faradaic current induces toward a favorable result in mild and curable forms of chorea, more rapidly than the present system of internal medication.

2d. In cases of chorea of long standing, that are rebellious against ordinary medication, but are not dependent on hereditary predisposition, general electrization, perseveringly administered, will often work a permanent and complete cure.

The Treatment of Chorea by the Sulphate of Zinc. By E. S. Dunster, M.D., [Medical Gazette, Nov. 16, 1867.]

[Four cases are reported, in three of which a perfect cure was obtained by the zinc alone.]

Two Cases of Chorea successfully treated by the Sulphate of Manganese. By Prof. Wm. A. Hammond, M.D. [Medical Gazette, Nov. 2, 1867.]

The Relation of Chorea to Rheumatism in Children. By Henri Roger. [Translation from the Zeitschrift für Pract' Heilk', in the St. Louis Medical and Surgical Journal, Jan., 1868.]

Remarks on the Disorderly Movements of Chorea and Convulsions. By J. Hughlings Jackson, M.D. [Medical Times and Gazette, Dec. 14 and 21, 1867.]

APHASIA.

ART. 15.—*A Statement of the Aphasia Question; together with a Report of Fifty Cases.* By E. C. Seguin, M.D. [Quarterly Journal of Psychological Medicine and Medical Jurisprudence, Jan., 1868.]

Dr. Seguin's article is a good resumé of what is thus far known of this interesting question. He begins with a brief, yet sufficiently complete history of the recorded observations of cases, and then takes up the subjects of etiology and pathology, and then discusses at length what is at present the most interesting problem connected with this disease, namely, its localization. On the question of the left anterior lobe, the hypothesis proposed by the Drs. Dax, father and son, the figures stand 514 for, and 31 against; these last including four very remarkable cases where the left anterior lobe had

sustained very extensive injury, and yet no aphasia followed. Broca's hypothesis of localization in the posterior part of the third frontal convolution of the left hemisphere, in the neighborhood of the Island of Reil, is supported by 18 cases, but negatived by 34.

Four only of the cases reported by Dr. Seguin were observed by himself; the remainder are taken from the records of the New York Hospital, and as many of them occurred before Aphasia was recognized as a distinct disease, the reports are very incomplete, and are of no value in a scientific point of view. Dr. Seguin calls upon the profession to report carefully such cases as may come under their observation, and desires that in fatal cases, especially careful examination, both of gross and microscopical appearances of the brain, should be recorded.

A good many cases are now appearing in the columns of the various medical journals. We shall note here, only those where the examination appears to have been made with such care as to warrant accepting them as an authoritative evidence on this question.

ART. 16.—*On the Localization of the Faculty of Speech*,
By F. Bateman, M.D. [British Medical Journal.
Nov. 9, 1867.]

Dr. Bateman's paper, read before the Medical Section of the British Medical Association at the meeting in Dublin, calls attention to very palpable defects in many of the papers and cases on this question now appearing so profusely in the journals. 1st. They seem to have been written with preconceived notions on the part of their authors, and are efforts to prove one theory against another, rather than to arrive at truth by a simple and careful record of cases. 2d. Few of the reported cases have been supported by necroscopic examination.

In his own practice three cases occurred, all termina-

ting fatally, and all presenting no lesion whatever of the frontal convolutions, and in one of the three, a very well-marked instance of the amnesic form of aphasia, (i. e., that characterized by the loss of memory of words,) the lesion was not near the anterior lobe at all, but located at the posterior part of the upper surface of the hemisphere.

ART. 17.—*On Aphasia.* By John Popham, A.M., M.B.
[Dublin Quarterly Journal of Medical Science,
August, 1867.]

Dr. Popham's paper is a most valuable and scientific discussion of the subject, comprising the history and pathology; the nature of the complex processes concerned in the act of speech; defects in any of these processes may interfere with perfection of speech, and thus gives rise to numerous varieties of aphasia, which, however, are to be distinguished from aphasia proper; the relations of this last to the cognitive faculties, and the operative mechanism concerned in speech. Altogether among the recent papers this, and Dr. Ogle's, are the best scientific summing up of the question with which we are familiar.

ART. 18.—*Aphasia and Agraphia.* By William Ogle, M.D. [St. George's Hospital Reports, Vol. II., 1867.]

The chief object of Dr. Ogle's paper is to examine how far the records of St. George's Hospital harmonize with the doctrine of the localization of the faculty of articulate speech in a limited portion of the left hemisphere. Twenty-five cases are recorded, five of which came under his own observation. In all the twenty-five, speech was more or less impaired, and in all there was disease of the left hemisphere. Dr. Ogle is evidently impressed with the truth of Broca's hypothesis

or theory, and thinks that as cases of aphasia are by no means uncommon, pathological investigation must soon give a certain answer to the question.

Aphasia with Lesion of the Third Left Frontal Convolution.

By Robert T. Edes, M.D. [Boston Medical and Surgical Journal, Feb. 6, 1868.]

A case of complete aphasia following a sudden paralytic attack, in a woman, 81 years of age. Autopsy carefully reported.

Cases of Defect of Speech, with Hemiplegia of the Right Side. [Medical Times and Gazette, Oct. 26, 1867.]

Four cases occurring under Dr. Peacock's care, at St. Thomas's Hospital, and showing only the connection of aphasia with right hemiplegia.

A Case of Traumatic Aphasia with Remarks. By J. P. Bramwell, M.D. [British Medical Journal, August 31, 1867.]

A Case of Extensive Lesion of the Left Posterior Frontal Convolution of the Cerebrum without Aphasia. By J. N. Simpson, L.R.C.P. [Medical Times and Gazette, December 21, 1867.]

A Case of Red Softening of the Surface of the Left Hemisphere of the Brain with Sudden Loss of Speech and Hemiplegia. By H. C. Bastian, M.D. [British Medical Journal, December 14, 1867.]

Softening of the Left Hemisphere of the Brain with Aphasia. St. George's Hospital, under care of Dr. Ogle. [Lancet, December 14, 1867.]

MISCELLANEOUS.

ART. 19.—*On the Diagnosis of Obstructive Disease of the Left Auriculo-ventricular Aperture.* By Thomas B. Peacock, M.D. [British and Foreign Medico-Chirurgical Review, October, 1867.]

Dr. Peacock, after pointing out the difference of

opinion entertained by the authorities on this question, narrates in detail several marked cases, and gives the morbid appearances found at the autopsies. The question is generally to make the diagnosis between mitral obstruction and regurgitation, and on this point the case is summed up, namely:

The præcordial dulness on percussion in cases of mitral obstruction is not generally much extended to the left of its normal limits, but is wider on the right side than it should be. The sounds of the right side of the heart are also louder, and the action more powerful; and especially the sound of the pulmonic valves, heard immediately to the left of sternum at the level of the third cartilage, is very loud and ringing; and often presents a striking contrast to the sound of the aortic valves, heard at the corresponding point on the right side of the sternum. The apex of the heart generally beats in the fifth interspace and within the line of the nipple, and occasionally it is attended by a purring tremor. From only a small portion of blood being received into the left ventricle and impelled thence into the aorta, the radial pulse is small and not infrequently somewhat quick, as the heart appears to act more rapidly, in order to compensate for the smallness of the current which it is able to transmit with each contraction. Usually also the pulse, though small, is somewhat firm; and it does not generally become irregular till at the more advanced periods of the disease.

In cases of mitral regurgitation, on the other hand, the most marked changes occur in the left ventricle and auricle. These cavities become greatly increased in capacity, and the ventricle especially is widened and rounded at the apex; the walls at the same time generally retaining their normal width or being thinner than natural. The right cavities also become dilated, but

the parietes of the right ventricle are not generally materially increased in width. Hence the dulness on percussion, though it may be extended to the right, is especially widened on the left side; and the impulse of the heart is usually felt in the line of the nipple or to the left of the line; generally also it is diffused so that it can be seen and felt over a large space, and often the precise point at which apex beats cannot be felt. Though the auricle is of large size, yet, as only a small portion of the blood which it receives is thrown into the aorta, while the other, and perhaps the larger, portion regurgitates into the auricle, the pulse at the wrist is small, and from the thinness and feebleness of the ventricular walls, weak. The action of the heart also, from the same cause, rapidly becomes irregular.

2. In cases of mitral obstruction the lungs are in a state of permanent engorgement, yet as this condition is only slowly brought about and does not generally obtain to any great degree except in cases which are of long duration, the pulmonary vessels undergo gradual dilatation and are able to accommodate themselves to the altered condition; apoplectic extravasations do not therefore readily occur, nor does the pulmonary tissue become œdematous, or the bronchial mucous membrane inflamed. The respiratory movements, therefore, though short and hurried, are not greatly embarrassed, nor do the patients usually suffer much from cough or expectoration.

In cases of mitral regurgitation, on the contrary, the valvular defect is often rapidly and sometimes suddenly developed, and the engorgement is not continuous but intermittent; the vessels in the lungs are therefore very apt to give way under the sudden and extreme distension to which they are subjected, and apoplectic extravasations occur, the lung tissue readily becomes œdematous, and bronchitis and pneumonia frequently occur. Hence the breathing is usually extremely difficult and laborious; and the patient is troubled with cough and copious expectoration, sometimes thin and watery

and much mixed with air, at others viscid and solid, and generally more or less bloody.

3. In cases of mitral obstruction the increased power of the walls of the right ventricle enables it to resist for a long time, so that the effects of the obstruction are to a considerable degree limited to the lungs; and it is only when the resistance of the right ventricle has been overcome that the systemic vessels and parenchymatous viscera become engorged. Hence the functions of the liver, kidneys, and brain are not at the earlier period of the disease materially disordered, and dropsical symptoms do not quickly supervene. In mitral regurgitation this protective influence does not come into play, and the system generally becomes greatly and rapidly engorged, the veins of the neck are dilated and pulsate, the liver becomes enlarged, and the kidneys and brain engorged. Hence the rapid occurrence of dropsy, often with jaundice, and generally with albuminous urine; and the œdema becomes marked in the face and upper extremities as well as in the abdomen and lower extremities.

4. The aspect of the patients with the two forms of mitral disease is generally very different. In cases of mitral obstruction the patient is usually very pallid and anæmic looking, with, perhaps, a slight flush in the cheeks. His countenance bears, indeed, a general resemblance to the appearance of a patient with regurgitant disease of the aortic valves, with, however, this marked distinction, that while in the latter affection the face is generally thin and the expression of countenance anxious, in the former the face is usually somewhat full or puffy looking, and the expression heavy and oppressed. The aspect in obstructive disease is, however, very different from the heavy and bloated and livid countenance which is so strikingly characteristic of mitral regurgitation. It must, however, be understood that these distinctions apply to characteristic cases of the two forms of disease; not, of course, to those in which there is both obstruction and regurgitation, nor

yet to the advanced stages of obstructive disease in which the power of the heart is giving way and the circulation is becoming greatly embarrassed.

The immediate danger in obstructive disease of the mitral valves is less than in regurgitant disease; for the condition being generally slowly induced and only attaining an aggravated degree after the lapse of a long period, the heart is able to accommodate itself to the altered circumstances, and the lungs and system at large are less seriously involved. In mitral regurgitation, on the contrary, the condition is often rapidly and sometimes suddenly brought about; the heart, therefore, is not able to resist the altered condition, the lungs and general system become quickly involved, and the patient is exposed to great and immediate danger. In the former affection the patient suffers chiefly from faintness and debility, and the tendency is to death from asthenia. In the latter he complains of oppression and sense of suffocation, and death usually occurs from apnœa. This is due especially to the secondary affections of the lungs and the dropsical symptoms, but the patient may also die comatose, owing to the brain being congested and the blood loaded with effete materials from the disordered functions of the liver and kidneys. It must, however, be borne in mind that obstructive disease is necessarily a permanent condition; whereas regurgitation may only be a temporary defect, due to maladjustment of the valves from distension or irregular action of the heart. Another source of danger which threatens in both these forms of disease is embolism from the deposition of fibrinous clots on the valves or lining membrane of the auricle, and the conveyance of portions of separated clot into some of the smaller vessels which may so become obstructed. I do not know that in this respect there is much, if any, difference in the two forms of disease.

The difference in the modes in which obstructive and regurgitant disease tend to terminate, will also necessitate in general somewhat different methods of treat-

ment. In both forms of disease it is of essential importance to avoid as far as possible all causes which can add other sources of embarrassment of the circulation to those which are already in operation; and we must endeavor to prevent the occurrence of pulmonary complications, to maintain the healthy performance of the functions of the liver and kidneys, and to uphold the overtaxed power of the heart. In cases of obstruction, however, the latter requirement becomes of paramount importance, and our chief aim must be to aid the heart to propel the blood through the constricted orifice. In cases of regurgitant disease, on the other hand, the predominant sources of danger are the engorgement of the lungs and of the parenchymatous viscera, and our chief attention must be directed to the relief of such conditions. The former object may be best effected by a tonic and analeptic course of treatment, and by remedies calculated to strengthen the muscular structure of the heart and quiet its action, and of these iron is by far the most effective. The latter intention must be carried out by the use of mild, alterative, and eliminant medicines, and especially by aperients and diuretics, and for this purpose digitalis is probably one of the most effective remedies which we can employ. In both forms the strength of the patient must be upheld by light and easily digestible and nutritious food, and by the exhibition of stimulants, preference being shown rather to the use of wine and spirits than of malt liquors.

ART. 20.—*An Attempt to Obviate the Necessity of a too profuse and constant employment of Quinine in Intermittent Fevers.* By E. Montgomery, M.D. [St. Louis Medical and Surgical Journal, January, 1868.]

The Treatment of Malarial Fevers by the Sulphites and Hyposulphites. By W. E. Turner, M.D. [Leavenworth Medical Herald, November, 1867.]

Cases of Intermittent and Remittent Fevers treated with Chloroform Internally. By George F. Brickett, M.D. [Chicago Medical Examiner, October, 1867.]

Liquor Ferri Persulphatis in the Treatment of Intermittent Fever. By G. H. Lenoir, M.D. [Southern Journal of Medical Sciences, Nov., 1867.]

The Use of the Hypo-sulphite of Soda in Malarial Diseases. By S. E. Hampton, M.D. [Cincinnati Lancet and Observer, Nov., 1867.]

Chloroform in Intermittent Fever. [By D. Scott, M.D. Chicago Medical Examiner, Feb., 1868.]

The great prejudice among many people against the use of quinine, and the fact that in many chronic cases this agent from long-continued use has lost its efficacy, induced Dr. M. to test other remedies and plans of treatment with the view of overcoming these difficulties. In recent attacks of intermittent fever, the use of the hot bath for ten minutes, the water being as hot as the patient can bear it, will in many cases cause the disease to disappear. Chloroform internally in teaspoonful doses, (administered of course in a proper menstruum,) at the commencement of the chill, is remarkably prompt and efficient in arresting the disease. It is rarely necessary to give more than two doses at an interval of half an hour, until the patient is in a quiet, comfortable condition, very little fever and no subsequent chill supervening. As a substitute for quinine Dr. M. has found the following tonic combinations serviceable, premising the use of either with an efficient anti-bilious cathartic. These remedies are to be used in the intermission, and during the febrile stage twenty grain doses of the bisulphite of soda or magnesia will be found an excellent adjuvant to the hot bath before mentioned.

R Ferri ferro-cyanureti, dr.j ; pulv. piperini, ext. taraxaci, ana gr. xx.

M. Div. in pil. No. xxx. Sig.—Take one every three hours when free from fever.

R Pulv. ferri citratis, dr.ij; glycerini, f.oz.ij; tinct. lyttæ vesicat., f.dr.ij; aquæ, f.dr.vi.

M. Sig.—Take table-spoonful every two hours in intermission.

R Pulv. ferri citratis, dr.ij; pulv. pip. cubebæ, dr.iiij.

M. Div. in chart. No. xii. Sig.—Take one every three hours in the absence of fever.

In this connection it is interesting to compare the results reported by Dr. W. E. Turner, of his experience with the sulphites in the treatment of malarial fevers. He has used this article, the hypo-sulphite of soda, in nearly one hundred and fifty cases of intermittent and remittent fevers with almost unvarying success, and with better after-results than with quinine, or any of the alkaloids of the Peruvian bark. The sulphite was also used in a large number of cases, and its power in arresting the malarial diseases was found quite equal to the hypo-sulphite. The usual dose for either of these salts was from fifteen to twenty grains, repeated every two hours for an adult. The trifling cost of these remedies is an item of consideration to the poor. Their action is not perhaps so speedy as quinine, but there is less tendency to a periodic return of the disease. The marked success of these alkalies in the treatment of intermittent and remittent fevers, Dr. T. seems to consider, is strong proof of their palmellar origin, as claimed by Prof. Salisbury.

Dr. Brickett adds his testimony, supported by the evidences of a number of well marked cases, to the efficacy of chloroform administered internally in drachm doses, as suggested by Dr. Merrill, of this city.

Dr. Lenoir, influenced by the same considerations as Drs. Montgomery and Turner, was induced to try the liquor ferri persulphatis in doses of from eight to fifteen drops every four hours. He reports that immediately after the administration of the iron the chills ceased, and in but one case was there a recurrence of the disease; in that the patient had but one chill. He

asks of the profession further trial of this agent, and that the results may be made public.

Dr. Hampton's experience of the use of the hypsulphites is fully corroborative of Dr. Turner's above given. In sixty-six cases in which he used the remedy, it failed in one only, and so thoroughly convinced is he of the anti-periodic properties of this remedy, that he seldom prescribes any other.

Per contra, Dr. Scott reports that his experience does not sustain the commendations bestowed by Dr. Brickett on this agent. In upwards of fifty cases, the following were the results: In twenty, after the administration of one drachm, the chill was immediately arrested, except in one instance, where two doses were required; in eleven of these cases the fever was probably abridged by the chloroform; in the others it ran its usual course, terminating, with few exceptions, in profuse perspiration. In eight, the paroxysm returned on the succeeding day; in nine, on the second; and in the remaining three, in from seven to twenty days. No reliance, therefore, was placed on the curative properties of chloroform, and in the remaining thirty cases it was administered solely for the purpose of abridging the chill.

ART. 21.—*Digitalis in Rheumatism*. [Edinburgh Medical Journal, Nov., 1867.]

An elaborate and practically valuable paper on the treatment of rheumatic fever by digitalis, has been recently communicated to the Imperial Academy of Medicine at Paris by Dr. Oulmont, of L'Hôpital Lariboisière. Twenty-four cases of rheumatic fever, and a few cases of pneumonia and of typhoid fever, were treated with this substance; but the important therapeutic deductions that are contained in the paper were derived from the first of these diseases only. As much as fifteen grains of digitalis powder, in the form

of infusion, was given in the twenty-four hours, and continued at this rate until emesis was caused, when the quantity was reduced to such doses as could be tolerated by the stomach. Among the conclusions that Dr. Oulmont arrives at are the following: 1. In acute rheumatism, digitalis, when given in the above doses, lowers the pulse by from 10 to 40 beats in three or four days; 2. The diminution of the pulse-rate is accompanied with a fall in the temperature amounting to several degrees; 3. Digitalis causes a rapid and complete disappearance of the symptoms when the fever is unaccompanied with complication; 4. It appears to prevent those exocardial and endocardial complications that so commonly occur in this disease; 5. No cerebral symptoms occurred in any of the cases; 6. The excretions were unaffected: the abundant perspiration of rheumatic fever was neither increased nor diminished; and the urine was not modified in quantity or quality, digitalis failing to excite diuresis in this as in other febrile affections; 7. Digitalis has no action on the rheumatism proper—it acts only on the fever by lowering the pulse-rate and the temperature.

Dr. Oulmont also discusses the *modus operandi* of digitalis on the circulation and temperature. He believes with Traube and Von Bezold, in opposition to Schiff and others, that the pneumogastric nerves possess the function of cardiac inhibition; and he adheres to the view of digitalis having a stimulating action on these nerves. But as such a cardiac action is insufficient to account for the effect on the temperature, Dr. Oulmont feels inclined to express his concurrence in the opinion of an independent influence by digitalis on the vaso-motor nerves.

ART. 22.—*Iodine Inhalation in the Treatment of Diphtheria.* By J. Waring Curran, L.K.Q.C.P.I., etc.
[Lancet, October 26, 1867.]

In our December number, 1867, we noted Mr.

Curran's suggestion for this plan of treatment. Now, in answer to the application of numerous correspondents, he gives the details of the method, and adds the histories of several cases treated successfully. He says:

"The formula which I employ for inhalation purposes is the same as that formerly used by Sir Charles Scudamore in pulmonary phthisis, namely: iodine, iodide of potassium, of each four grains; alcohol, four drachms; water, four ounces. Of this, for each inhalation, commencing, I take a drachm; add to it a pint of vinegar infused with a handful of dried garden sage, placed in a common inhaling jar, steadily increasing the quantity of iodine solution until I arrive at half an ounce each inhalation. The circumstances of the case, the age and strength of the patient, and the severity or mildness of the attack, guide me with regard to the number of inhalations, and the time occupied by each. For an average case, occurring in a healthy patient, I would say twelve inhalations at least per diem, with eight to twelve minutes (an interval allowed to rest) for each. The loss of valuable time in country practice, occasionally, will not permit the delay of sending and waiting for an apparatus; accordingly not unfrequently I have been compelled to make my inhalation in the following manner: Having boiled the vinegar and sage, place it in a teapot with a long spout, and when the patient is prepared to inhale, add the iodine, cover the lid of the vessel with a cloth, keep up the temperature by a spirit-lamp placed underneath, and holding the vessel by the handle, allow the patient to inhale through the spout. Laryngeal irritation is in a great measure prevented by the small quantity at first used, through the patient becoming gradually used to it."

ART. 23.—*On Croup and Diphtheria.* By Mr. J. Warrington Howard. [St. George's Hospital Reports, Vol. II., 1867.]

Mr. Howard states most emphatically his belief that

there are two distinct combinations of symptoms with their associated pathological changes, to which may be given the names croup and diphtheria; that these combinations are constant and the elements or terms of them are never interchangeable, although there may be certain added quantities common to both.

He then lays before the reader his notes on these two diseases, which may be summed up under the following headings, each of which, however, is elucidated in detail:

1. Diphtheria is an acute specific disease; croup is a local inflammation.

2. Diphtheria is contagious; croup is not.

3. Diphtheria is epidemic; croup is not.

4. Diphtheria is an asthenic disease; croup is a sthenic inflammation.

5. The exudation in diphtheria attacks first the fauces and pharynx, but in croup the trachea.

6. Diphtheria attacks persons of all ages; croup is a disease of children.

7. There is usually albuminuria in diphtheria, but not in croup.

8. Diphtheria is frequently followed by nervous derangements, which do not occur after croup.

9. Changes occur in the spleen in diphtheria which are not found in croup.

10. Blood-changes occur in diphtheria, which are not observed in croup.

In the matter of treatment tracheotomy is very strenuously advocated early in diphtheria. The success of the operation depends on its early performance. This is less to be insisted on in croup, where the operation may be delayed even until the child shows the effect of non-aëration of the blood. The arguments in favor of tracheotomy are strong and well put, and substantiated by an appeal to numerous recorded collections of cases wherein this plan has been followed.

Varia.

THE GEOGRAPHICAL DISTRIBUTION OF PHTHISIS.— Authorities (particularized by Dr. Gross) have noted that phthisis is rare between the 50th and 60th degrees of north latitude ; it is almost unknown in Iceland, the Faroe Islands, the northern part of Norway, Finland, Scandinavia, and in the Island of Marstrand, (which has been called the Swedish Madeira.) From 50° to 45° the malady increases in frequency, causing 114 out of every 1000 deaths in Vienna, 107 in Munich, 200 in Paris, 236 in London, and 135 in Berne. Between 45° and 35°, phthisis attacks at Marseilles a fourth (?) part of the population, at Genoa a sixth, at Nice a seventh, at Naples and Philadelphia an eighth, and at Rome a tenth. It is common in the basin of the Mediterranean, at Malta, Corsica, and especially in Sicily. Between 20° and 10° it is (as has before been said) frequent in the Antilles, where it is very destructive among the negroes. In Germany, the fewest cases are met with in the mountainous parts, Taunus, Erz-Gebirg, Hartz, and the forest of Thuringia, where, out of 80,000 patients attended by Dr. Brockmann, there were found only twenty-three tubercular cases, and of these nine had imported the germs of the malady from other districts. In France there is Briancon, the most elevated city in Europe (1306 metres,) where phthisis is almost unknown. In England a great difference is observed in the frequency of the disease, as between the metropolis and the centres of manufacture ; while in the southern and northern agricultural districts it is proportionately rare. In Spain its frequency on the elevated plateaux of Castile and Estramadura is remarkable. In Portugal it would appear to be rare, Lisbon excepted. In Greece the malady is widely spread, especially in the cities. In Turkey, and notably in Constantinople, its frequency is very great. In Asia the rarity of phthisis on the Ghats and Neilgherry plateaux, those of Armenia and Persia, and on the steppes of the Kirghis, is attested by

divers observers. According to Livingstone, phthisis ought to be nearly unknown in central Africa, yet the negroes who are taken thence are decimated by that disease in the East and West Indies. The south of Egypt presents a notable immunity; Nubia likewise, as well as St. Helena, Teneriffe, the Azores, Sierra Leone, and Senegambia. Pruner states that phthisis diminishes in Egypt in direct proportion from the sea towards the south, to the point where in Upper Egypt it is very rare. In Algiers, once the promised land of the consumptive, it is a fact that the French troops are less exposed to this cachexia than in France, but the civil population, notably the indigenous inhabitants, and the negroes, are often attacked. The high mountain ranges of North and South America are accredited with immunity from phthisis, while on the neighboring coasts of Panama, Nicaragua, Mosquito, Guiana, Peru, and Chili, it ravages with aggravated symptoms.—*Medical Times and Gazette*.

THE PROPORTION OF FIBRIN IN BLOOD.—Some interesting experiments have recently been carried out by Herr Mayer, of Worms, who has recently reported the result of his observations to the Academy of Sciences at Vienna. He procured fresh blood by means of a canula from the carotid artery of a dog, and extracted its fibrin by various methods. The analysis gave such discrepant figures that Herr Mayer's most important conclusion is that we certainly do not yet know what is the normal proportion of fibrin.

EXAMINATIONIANA.—A good tale or two are told of Malgaigne in the *Gazette Medicale de Lyon*. "How do you proceed," he asked a candidate, "in performing the operation of extraction of cataract?" "I—I," hesitatingly replied the youth, "empty the anterior chamber." "Very well; and next?" The candidate, seeing himself thus encouraged, and believing himself to be on the right road: "And then I empty the posterior chamber!" "Capital; and then?" "I—I—I—"

“Why, you stick up a bill, ‘*chambre à louer.*’” In the next the candidate was evidently a sharper fellow than this noodle. Malgaigne, interrogating him upon the rotation of the stomach in its conditions of vacuity and repletion, and on the relative gravity of wounds of the organ in these two different conditions, in order to put the question more precisely, said, “Now, sir, if you were called out to fight a duel, would you think it more prudent to breakfast before or not?” “By my faith, sir,” replied the other, “I would breakfast before, because I could by no means be sure of being able to do so afterward.” The last we give in the original. Examining a would-be *officier de santé*, he asked him how he would proceed for the extraction of the placenta. “Je tirerais sur le cordon.” “Et après?” “Je tirerais sur le cordon.” “Bien, mais si rien ne venait?” “Je tirerais plus fort sur le cordon!” “Eh! Monsieur, une portière en ferait autant que vous.”

THE USE OF PERCHLORIDE OF PALLADIUM IN MICROSCOPICAL INVESTIGATIONS.—At the last annual meeting of the German Naturalists and Physicians at Frankfort, Dr. Schulze, of Rostock, strongly recommended the use of the perchloride of palladium in microscopic investigations. He used a solution of one in eight hundred, feebly acidulated with hydrochloric acid. Small pieces of tissue became, by the addition of this substance, as consistent as cheese, within eight days, and minute sections might then be easily made. The sections should then be deprived of water, and might be impregnated with carmine, whereby those parts which were not colored by perchloride of palladium obtained a red appearance. By the use of the solution of palladium, the connective and elastic tissue remained uncolored, hyaline membranes assumed a light yellow hue, cell-formations a darker yellow, and the nerve-marrow a greyish black. The fact that the unstriped muscular fibres (contractile fibre-cells) were colored yellow by the perchloride, was of great importance,

because they might thereby be easily distinguished from the connective tissue. Dr. Schulze had used this agent in his researches on the structure of the ciliary muscle, and found that the circular fibres formed a coherent layer on the whole inner surface of the ciliary body, while the longitudinal fibres formed a similar layer on the outer surface of this body. The anterior point of insertion of the muscle was fixed, the posterior being movable, so that, if a muscular contraction took place, the zonula Zinnii, which, in the elastic tense condition, was inserted on the capsule of the lens, would be deprived of its tension, and a more considerable curve of the lens be brought about.—*Medical Times and Gazette*.

UNSUCCESSFUL CASES OF OVARIOTOMY IN ITALY.—Dr. Ferratini (of Sarzana) states, in the *Ippocratico* of January, that seven operations of ovariectomy have been undertaken in Italy since the measure has been revived by English surgeons, all seven having proved fatal. Dr. Ferratini contrasts this sad result with the last forty-six cases of Mr. B. Brown, forty-one of which were successful, and thinks that the principal cause of the failures in the hands of Italian surgeons is the late period of the complaint when ovariectomy is performed. He considers that the resistance of the organic fibre of this and other countries is superior to the tone of the Italian organism; that the moral force is weak in Italy; and that in England, Germany, and America, firmness of purpose is more frequently seen than in Italy.

ANCIENT SURGICAL INSTRUMENTS.—I would now venture to turn, for a brief space, to the instruments which the Roman surgeon employed. To these much interest, both to the antiquarian and to the surgeon, would attach, if only our knowledge were a little more complete; as it is, the fragmentary information, and the few unmutilated specimens which remain, serve rather to stimulate our curiosity than to satisfy our wishes. Nor is the inspection unmingled with regret; for a complete repertory of the surgical instruments

would throw very material light on doubtful passages in the older authors, and give to their graphic descriptions still more of life and reality. Uriconium, so far as I learn from my friend Mr. Wood, has only furnished to the excavator a single lancet, some probes, and some ear-scoops, etc. In Pompeii, in the *Via Consularis*, the house of a surgeon has been disinterred, and forty surgical instruments there discovered. "In many the description of Celsus is realized; as, for instance, in the specillum, or probe, which is concave on one side and flat on the other; the scalpel excisorius, in the shape of a lancet-point on one side and of a mallet on the other; a hook and forceps used in obstetrical practice. The latter are said to equal, in the convenience and ingenuity of their construction, the best efforts of modern cutlers." (*Pompeii*, p. 348. T. H. Dyer. 1867.)

The Royal Bourbon Museum at Naples contains, as the result of the excavations at Herculaneum and Pompeii, inclusive of those just named, one hundred and ninety-nine different instruments. These have been described at length in a work by Professor Vulpes, of the University of Naples; and, from a notice of that work in the *Edinburgh Monthly Journal* of August 1853, I have drawn the following hasty sketch.

The largest instrument found is entirely composed of bronze, and was, doubtless, used as a *speculum matricis*. Speculum, as we use the word, it is not; but it is a dilator, and as such probably was found efficient. Such an instrument is referred to by Paulus Ægineta, who directs "that the speculum be held by the operator, but the screw be turned by an assistant, so that, the laminae of the stalk being separated, the vagina may be distended." Following this is the *speculum ani*, also made of bronze; the dilating power of the branches is obtained by the closing of two handles, which cross at a central hinge.

Forceps were found in considerable number. The greatest length of any of the forceps is a little more

than six inches, the shortest a little less than four inches.

Forty-five probes have been found in the buried cities, all of bronze.

One catheter has been discovered, also of bronze, possessing a double curve, and about ten inches long and three lines in diameter.

A lancet has been discovered, made of silver, and having a handle of bronze; the handle is beautifully turned and engraved. Along with this lancet, also was found a spoon of bronze used for examining the blood drawn from a vein.

Several cupping instruments, all made of bronze, have also been found.

A lever of bronze for restoring fractured bones to their places in cases of compound fracture has been found.

Iron was used for some instruments; e. g., for scalpels, hooks, etc., of which several examples have been found.

A curiously shaped instrument has been found, probably a lithotome; and even of somewhat the same pattern.—*From Dr. Newman's Address before the Shropshire Scientific Branch of the British Medical Association.*

THE Nineteenth Annual Meeting of the American Medical Association will be held in Washington, on Tuesday, May 5th, 1868, at 11 o'clock a. m. The following Committees are expected to report:

On Ophthalmology, Dr. Joseph S. Hildreth, Illinois, Chairman.

On Cultivation of the Cinchona Tree, Dr. J. M. Toner, District of Columbia, Chairman.

On Surgical Diseases of Women, Dr. Theophilus Parvin, Indiana, Chairman.

On Rank of Medical Men in the Navy, Dr. N. S. Davis, Illinois, Chairman.

On Insanity, Dr. C. A. Lee, New York, Chairman.

On American Medical Necrology, Dr. C. C. Cox, Maryland, Chairman.

On Leakage of Gas-Pipes, Dr. J. C. Draper, New York, Chairman.

On Medical Ethics.

On Plan of Organization, Dr. C. C. Cox, Maryland, Chairman.

On Provision for the Insane, Dr. C. A. Lee, New York, Chairman.

On the Climatology and Epidemics of Maine, Dr. J. C. Weston; New Hampshire, Dr. P. A. Stackpole; Vermont, Dr. Henry Janes; Massachusetts, Dr. Alfred C. Garratt; Rhode Island, Dr. C. W. Parsons; Connecticut, Dr. E. K. Hunt; New York, Dr. W. F. Thoms; New Jersey, Dr. Ezra M. Hunt; Pennsylvania, Dr. D. F. Condie; Maryland, Dr. O. S. Mahon; Georgia, Dr. Juriah Harriss; Missouri, Dr. George Engleman; Alabama, Dr. R. Miller; Texas, Dr. T. J. Heard; Illinois, Dr. R. C. Hamil; Indiana, Dr. J. F. Hibberd; District of Columbia, Dr. T. Antisell; Iowa, Dr. J. W. H. Baker; Michigan, Dr. Abraham Sager; Ohio, Dr. J. W. Russell; California, Dr. F. W. Hatch; Tennessee, Dr. Joseph Jones; West Virginia, Dr. E. A. Hildreth; Minnesota, Dr. Samuel Willey.

On Clinical Thermometry in Diphtheria, Dr. Joseph G. Richardson, New York, Chairman.

On the Treatment of Diseases by Atomized Substances, Dr. A. G. Field, Iowa, Chairman.

On the Ligation of Arteries, Dr. Benjamin Howard, New York, Chairman.

On the Treatment of Club Foot without Tenotomy, Dr. L. A. Sayre, New York, Chairman.

On the Radical Cure of Hernia, Dr. G. C. Blackman, Ohio, Chairman.

On Operations for Hare-Lip, Dr. Hammer, Missouri, Chairman.

On Errors of Diagnosis in Abdominal Tumors, Dr. G. C. E. Weber, Ohio, Chairman.

On Prize Essays, Dr. Charles Woodward, Ohio, Chairman.

On Medical Education, Dr. A. B. Palmer, Michigan, Chairman.

On Medical Literature, Dr. George Mendenhall, Ohio, Chairman.

Secretaries of all medical organizations are requested to forward lists of their Delegates as soon as elected, to the Permanent Secretary, Dr. W. B. Atkinson, Philadelphia.

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[No. 2.]

Original Communications.

ART. I.—*Obstetric Clinical Memoranda.* By GEORGE T. ELLIOT, Jun., M.D., Professor of Obstetrics and the Diseases of Women and Children in the Bellevue Hospital Medical College, etc.

MRS. —, aged twenty-two, short in stature but well built and healthy, fell in labor with her first child, at term, at 11 p. m., December 30, 1867. It was estimated that about half the water came away with the first pains, and the remainder came away on the afternoon of the 31st. I was called at 4 a. m., January 1, 1868, and the patient transferred to me. She had been up to this time in charge of a gentleman practising as a homœopath. It was represented to me by the family that there had been scarcely any sleep for two nights. The patient's general condition was good, but she was

complaining of great pain in the bladder, although there was no urine therein. The head was in the superior strait, movement of descent not completed, first position. The head was large and closely fitted, the cervix fully dilated, the vagina cool, not dry, but unyielding, and not normally relaxable. The pains were strong and frequent, but she complained so much of the pain in the bladder that I put her at once under chloroform, and after observing her for a couple of hours, decided to deliver her with forceps. Fœtal heart beating. Dr. J. G. Perry gave the anæsthetic, and agreed with me and the family that the great difficulty in delivery would arise from the narrow and undilatable vagina and vulva. In the application of my forceps the spiral sweep of the second blade was rendered impossible by the adaptation of the head to the superior strait, so that I carried it at once to its place behind the right acetabulum. I sat on a low cushion on the floor, and found so much difficulty in effecting descent and rotation that I drew the pelvis several times over the edge of the bed, and my assistants had to oppose my tractions by strong counter-pressure against the knees. The special difficulty in the case, however, existed in the unyielding vagina and perineum, and before commencing the movement of extension I substituted a slender pair of short forceps for my own. I now waited at intervals, stopping my tractions so as to imitate the pains of labor, and to allow time and opportunity for dilatation. When the perineum came on the stretch I replaced the second pair of forceps with a pair of straight ones, so small and slender that I had

put them in my case and owned them for many years with scarcely a thought that they would ever be necessary. Cautiously, and at intervals, I continued the strong tractions which the rigidity of the tissues demanded, but as these held firm, I was at last obliged to complete the delivery with all the care that I could; but the perineum and the recto-vaginal septum were split and divided to within an inch of the os uteri. The child was a girl, with a well ossified, unmoulded head, measuring beneath the caput succedaneum sixteen and a half inches of occipito-frontal circumference. It was scarcely marked, and has done uninterruptedly well. Placenta came away well.

Having sent for all the necessary instruments, and brought the parts into a good light, I requested Dr. Perry to decide the question whether he should sew the parts up then or defer the operation. After careful examination, he stated that the tear was so bad and the parts so swollen that he did not believe that accurate apposition was possible at that time. The patient was then directed to keep her legs together, the vagina was carefully syringed out twice a day with flaxseed tea; warm spirits were applied to the vulva to reduce the swelling. The catheter was used until the 6th, and the patient was well fed at once with beef-tea, milk-punch, egg-nogg, and champagne when she fancied it. M'Munn's elixir was given at night, and the aromatic spirits of ammonia when there would be any tendency to faintness. The lochia did well, there was plenty of milk in the breasts, and on the 6th the bowels were freely and naturally moved. This I regretted, as it is

probable that a longer interval would have permitted entire union. As it was, the tear through the recto-vaginal septum healed down to near the margin of the anus, and the long line of union yet shows distinctly. There is perfect control of the fæces, and no descent of the vagina. She is recommended to avoid the strain of too much standing, to wear an instrument to support the weight of the intestines, and to continue to use a bed-pan to avoid straining at stool. When lactation shall have been completed, the question of an operation for the restoration of the perineum will be considered. As it is, the vagina and vulva are so narrow that the patient suffers no inconvenience, and both this condition and the admirable reparation effected by nature have surprised Dr. Perry and myself, although we attribute this result to the coaptation induced by the narrowness of the parts, and thus the influences which determined the accident effected the cure.

In reviewing this case I entertain no doubt that the time for applying forceps had been reached. Further delay would not have obviated existing obstacles, but would have increased the risk to mother and child. I was quite prepared for all the powerful and prolonged traction that was necessary, but I was surprised by the unyielding character of the vagina. I have met with and published cases of delayed labor from this cause, and the resistance of the perineum is well known to be a most frequent cause of delay in primiparæ, but I have never met with one of equal difficulty. I have removed the forceps in some cases where I could conclude the labor with the hand or with the finger in the rectum,

but these manœuvres were unsuccessful here, and there was no alternative but desisting from all traction or delivery with forceps. So small and slender were the blades with which I terminated the labor that they did not add materially to the result. It may be suggested that division of the perineum laterally or obliquely might have obviated the accident, but I do not think that such would have been the case, for I think that the movement of extension was not opposed by the perineum alone, but by the posterior vaginal wall, which remained unyielding. The case was one in which the perforator would have been unhesitatingly used by many practitioners of high authority and influence, whom I have met in Great Britain, long before they had made the exhausting efforts which I was compelled to use and repeat. The fact remains that there are some cases in which an unmutilated child cannot pass without serious laceration of the soft parts of the mother, whatever precautions are used, an event which may occur when no instrumental aid has been given. The camel cannot go through the eye of the needle. But when the accident does happen, the practitioner must feel that he has foreseen the danger, and neglected no precaution. Those who have delivered many of these difficult cases will appreciate an unwillingness to remove the forceps at this final juncture, when the alternative offered is that of allowing some hours more to pass before delivery. After one has been obliged to use such great tractive force, one desires to feel that efforts made for the sake of the child shall terminate with its assured safety, and that

many of the risks which complicate these cases may be dispelled by delivery and the establishment of respiration. Moreover, after such tractions, the head left to press on the vagina is a foreign body that may seriously increase the risks of swelling and those of constitutional disturbance, while if the instruments be again required—as would probably have been the case in this instance—they are then reapplied over tissues in a less favorable condition. Imitate the pains of labor by tractions and intervals of rest in this class of cases; in favorable cases where tractions have failed, and there is yet hope of ultimate success, withdraw them, and resume them tentatively after some hours or less of delay, provided that the interval may not have too seriously imperilled the child's life, or increased materially the risks to the mother's tissues. One certainly should do all this, and even risk to a justifiable extent the maternal tissues rather than destroy foetal life; but the alternative is less imperative when the obstacle depends on the unyielding maternal soft parts alone rather than on such disproportion as might be overcome by moulding of the head and repeated efforts. We have all seen cases where we feared that the perineum would give way, and have redoubled our attention to the methods of prevention, when, at the critical moment, relaxation has taken place, and no trace of laceration has been found. Such reminiscences encourage us in these recurring contingencies. It is probable that lacerations of this kind often occur in deliveries from the brim by an exaggerated attention to tractions in the axis of the superior strait, the operator forcing back the perineum,

and starting a laceration by pressure with his instrument. The vagina is not only thus lacerated by pressure posteriorly, or laterally by exaggerated side to side movements, but it may be lacerated by grasping the head unsatisfactorily or imperfectly and thus distending the vagina by the instrument, the blades of which are not properly applied to the head, or cutting its tissues with the sharp edge of a free blade, or by the sudden slipping of the instrument, which tears its way out of the vagina.* All such contingencies were carefully eliminated in the present instance.

The following cases represent examples of conditions in which the forceps could be removed with advantage, as the delivery could be otherwise effected, and of the application becoming necessary from the lack of such possibility.

Mrs. — had been for two days in labor (March, 1868) with her first child, which was alive, with the head in the brim, in the first position. Liquor amnii had escaped at the commencement of labor. She was a primipara of thirty-five, well formed, healthy, stout, cervix well dilated, soft parts in good condition, pains good. Dr. B. consulted me regarding the propriety of delivery, and we decided to give her four hours more, when we met again and found some trifling advance. The necessary tractions were very severe, and before concluding them I was obliged to slip the pivot and make some compression. When the head was brought on the perineum, I examined through the rectum, as is

* Vide "Obstetric Clinic," by the author. 8vo., pp. 458. D. Appleton & Co. 1868.

always my custom when there is a great rigidity, and found that I could reach the chin. I then withdrew the blades and scooped the head out with my fingers without tearing the posterior fourchette. The boy's cheeks and corner of the eye were marked by the instrument, but he did well, as did the mother.

Now no one can premise in advance that he will reach the chin or mouth and deliver this way, or that he will be successful in making tractions on the supra-orbital arch. If the head be much moulded and elongated, the caput succedaneum and part of the occiput may have passed within or through the vulva, and yet it be impossible to touch through the rectum more than the anterior fontanelle, as happened to me this month, (April, 1868.)

Mrs. —, a primipara of twenty-three, fell in labor at term at 9 p.m. The pains were very frequent, and when I saw her at 11, the head nearly touched the floor of the pelvis and the cervix was rapidly dilating. By 3 o'clock the membranes had ruptured, and extension had commenced. It was interesting to note that the original position was that of the posterior fontanelle to the left acetabulum, that this subsequently played around and rested below the right descending ramus, and subsequently coming back was restituted to the left. From 3 a. m. until 10 a. m., the head was held in position by the perineum, the pains were efficient, the caput increased; and this was without the vulva, but there was no advance of moment. I tried to aid by pressing on the fundus and sides of the uterus with the pains, (a very old and much abused practice,

which it is sought to revive,) by pressing the perineum, and by endeavoring to reach something to pull on through the rectum. Finally, I delivered her safely of a living boy, with a very delicate pair of straight forceps, without any laceration. The head was very greatly moulded, and the occipito-mental diameter so elongated as to explain the situation.

It would have been just as easy for me to have delivered her six hours before, but it really seemed rather unnecessary to deliver a primipara after four hours of labor. Moreover, if the perineum will give way in these cases, one prefers that it should not be in those in which forceps have been used.

It is my conviction, on the whole, that with a delicate pair of forceps, and careful tractions in the right direction, that a competent man actually diminishes the risks of perineal laceration, especially if he redoubles his care to prevent the posterior shoulder from making a bad tear or converting a slight one into one more formidable. Still do what we may they can never be absolutely prevented in simple or instrumental labor. Faulty relations of the sacrum to the soft parts or to the pubes may be a cause of such lacerations in natural labor and in instrumental deliveries, unless this has been the subject of intelligent appreciation. The operator should make the head hug the pubes as closely as possible, and remember how the perineum follows the head in its upward movement.

This is one of the arguments for placing the patient on her back for delivery with long forceps. With short handled forceps this manœuvre may be managed

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when the patient is on her side, but not with others. There are perinæ which will tear do what you may, even though there may be no special strain put upon them. It is impossible to define these cases accurately. Case 131, in my "Obstetric Clinic," is an example of one in which my forebodings were realized, although these had determined me to remove the forceps.

ART. II.—*Cancer of the Heart.* By E. R. HUN, M.D., of Albany.

A. McG., aged 32, widow, has four children, the youngest four years old. Was walking in the street just after having dined when she suddenly fell to the ground, and died immediately. No history of any previous illness.

Autopsy, eighteen hours after death.—External appearance of the body: well nourished. Rigor mortis well marked. Surface pale, except at the more dependent parts, where considerable hypostatic congestion existed. Bruise over the left malar bone, caused by the fall. *Thorax*: Lungs normal. Pericardial sac contained one ounce of sero-purulent fluid. Pericardial surfaces injected and over the right ventricle somewhat roughened by plastic exudation. Valves free from disease. Left ventricle contracted, and its tissue of normal color and consistency. Right ventricle relaxed and filled with dark fluid blood. In the substance of the walls of the right ventricle were three firm white deposits replacing a large proportion of the muscular tis-

sue. The largest of these deposits was situated near the apex, and it was directly over this point that the pericardium was roughened. This alteration of structure could be seen through the endocardium, and its edges presented a strong contrast to the surrounding red muscular tissue, the line dividing the two being remarkably abrupt. The adventitious deposit resembled in every respect the tissue found in scirrhus breasts, and creaked under the knife. It involved several of the columnæ carneæ, and extended part way along one of the cordæ tendinæ. There were also several nodular growths, composed of the same tissue, projecting from the surface of the heart and covered by the endocardium. *Abdomen*: The stomach was greatly distended by the undigested remains of the last meal. The uterus was enlarged, and its walls thickened by chronic metritis, while its cervix and os tinæ were covered with a thick tenaceous muco-purulent discharge. *Head*: not examined.

Microscopic examination of the deposits found in the heart developed a large number of caudate and fusiform nucleated cells with considerable granular matter and free nuclei. The nodular growths contained few caudate cells, but more of the rounded globular cells such as are found in encephaloid disease. Some of the muscular structure being examined, showed the transverse and longitudinal striæ well marked.

Quite a number of cases of cancer of the heart have been reported by various authors, and I have thought the subject one of sufficient interest to authorize me to append most of them to the above case. It is a curi-

ous fact that, in the majority of them, no symptoms have been observed during life to call attention to the disease of the heart, and even where cardiac difficulty has been suspected the symptoms have been so obscure as to afford no clue to their real cause. Several eminent pathologists doubt that cancer of the heart ever occurs except as secondary to cancerous disease of other organs, but it is evident that the above case contradicts such an opinion, and in two of the cases which follow it is distinctly stated that the disease was confined to the heart.

The only practical deduction to be drawn from this report seems to be additional caution in regard to surgical interference in cancerous disease. It does certainly afford another objection to operations for the removal of malignant growths, but its extreme rarity should render it of but slight importance in cases where the patient may obtain great relief from pain and anxiety at the hands of the surgeon.

Cancer of the heart is said by Rokitansky* to be an exceedingly rare disease, and is, in his opinion, "always owing to a highly developed cancerous dyscrasia, or to the proximity of a cancerous formation, as for instance, in the mediastinum." He mentions only one case as having fallen under his own observation in which there was acute medullary cancer of the heart, accompanied by very general acute cancerous formations in the form of numerous small roundish nodules seated in the innermost layers of the substance of the heart beneath

* Rokitansky, Path. Anat., vol. iv, p. 211.

the endocardium, and even upon it, somewhat in the manner of globular vegetations.

Lebert * states that he has frequently met with secondary cancers about the pericardium, and even in the muscular substance of the heart, but never has seen primary cancer of this organ.

Andral † gives an account of two cases of encephaloid disease of the heart. In both cases the right side of the heart was the part affected. In the first case the patient, aged fifty-six, presented only the usual symptoms of hypertrophy of the left ventricle, which, on dissection, he was found to have. In addition to this, almost the whole of the walls of the right ventricle and auricle were converted into a hard, dirty-white substance, traversed by a number of reddish lines, and possessing all the characters of encephaloid.

In the second case, the patient was thirty-seven years of age at the time of his death, and had enjoyed good health until two years previously, when he became slightly asthmatic; in this state he continued for five or six months, when he was suddenly seized one morning after breakfast with the most excruciating pain, at first confined to the region of the heart, but soon extending over the whole left side of the thorax. At the same time, his dyspnœa increased, and he had violent palpitations and vomiting; after an hour the pain abated, and the next day he was as usual. During the following year his difficulty of breathing gradually

* Lebert, *Anat. Pathologique*, t. i, p. 472.

† Andral, *Anat. Path.*, vol. ii, p. 215.

increased, and he had seven or eight returns of the same pain, which he compared to that of a violent toothache. At the time of his admission into La Charité, he was considerably emaciated, his face had a peculiar sallow tinge, and every evening there was a slight accession of fever. During the first month after his admission he had repeated attacks of violent pain of short continuance. He had occasionally violent palpitations; but in the interval between these attacks there was no stethoscopic evidence of disease either in the heart or lungs. At the end of six weeks the lower limbs, then the upper ones, and finally the face, became œdematous, and the patient died without a struggle.

The autopsy showed that the external wall of the right ventricle was occupied by a large knotted tumor, extending from its apex to its base, which projected so far externally as to lead one to mistake it for a supernumerary heart, and likewise protruded internally into the cavity of the ventricle. When divided, it was found to be composed of the substance named encephaloid, in some points hard, and in others soft and diffuent.

M. Destouches* presented the following remarkable case to the Société Anatomique. A man, aged twenty-nine years, suffering from albuminuria, died suddenly at Hôtel Dieu, while turning over in his bed. At the autopsy twenty-four ounces of blood were found in the pericardium. At the upper part of this cavity, at the point where the serous membrane is reflected, was

* Bulletins de la Soc. Anat., t. xxv, p. 253.

found an irregular opening with ragged and indurated edges ; this opening admitted the little finger, and led obliquely into the aorta, after a course of nearly two inches. Examined externally, the aorta presented a recent star-shaped laceration, situated one third of an inch above the origin of the anterior coronary artery. At the first glance, the walls of the vessel seemed perfectly healthy ; they offered a normal appearance, their color was not altered, their surface was smooth, and no concretion was perceived, nor was there any pathological deposit upon the internal coat. But upon closer observation a small rounded protuberance, with a slightly flattened top, was found half an inch from the rupture. Upon dissecting the external surface of the aorta, a tumor was found as large as a hen's egg, rounded and quite firm. One side of this tumor rested upon the external surface of the aorta, to which it adhered closely for one and a half inches ; on the other side it lifted up the corresponding layer of the pericardium. It was in the substance of this tumor that the accidental passage had formed, making a communication between the aorta and pericardial cavity. The surface of a section presented a lardaceous appearance. Pressure caused the exit of a milky juice, which, under the microscope, contained cancer cells and free nuclei.

Virchow * describes a cancer of the heart with polypous excrèscences in a woman aged thirty-nine years, who had died with general cancerous disease, commencing with a cancer of the left breast.

* Bulletin de la Faculté de Médecine.

Lebert * refers to a remarkable example of gelatiniform cancer of the heart. In a woman, who died of gelatiniform cancer of the stomach, the surface of the heart was everywhere covered with small, round, soft, yellowish tumors, some isolated and others confluent, partly concealed by a false membrane; the muscular substance of the heart was pale, thin and flaccid.

Laennec † has met two cases of encephaloid cancer of the heart. In one of these the cancerous matter formed in small masses, of the size of filberts, or less, in the muscular substance of the ventricles; in the other it was deposited in layers of one to four lines thick along the coronary vessels between the pericardium and heart.

Ollivier ‡ gives an account of a case of apoplexy, and after describing the cerebral lesions states that the muscular fibres of the walls of the right ventricle of the heart were evidently changed into a cerebriiform yellowish white tissue, offering all the characteristics of encephaloid productions. This cancerous degeneration occupied only the lower half of the muscular walls of the right ventricle. The left side was normal.

Bouillaud § gives four cases of cancerous disease of the heart and pericardium, three of them having fallen under his own observation. The first case occurred in a female aged forty-five years, who had presented symptoms of chronic peritonitis during the six months pre-

* Catalogue of the London College of Surgeons, vol. iii, p. 192, No. 1531.

† Laennec, *Diseases of the Chest*, p. 641.

‡ Ollivier, *Traité des Maladies de la Moelle Épinière*, t. ii, p. 164.

§ Bouillaud, *Traité des Maladies de Cœur*, t. ii, p. 164.

vicious to her death. At the autopsy the peritoneal cavity contained a considerable quantity of serum, in which were floating flocculi of lymph. The peritoneum, omentum, mesenteric glands, and liver, were involved in cancerous disease. The heart was atrophied, and contained in its substance two cancerous tumors, one in the wall of the right ventricle, and the other in that of the left.

In the second case the two pericardial surfaces were everywhere adherent to one another, and the pericardium covering the heart was considerably thickened, especially on the posterior aspect of the organ, where the underlying muscular tissue had lost its natural color and appearance, and had evidently participated in the degeneration of the pericardium. The diseased tissue was indurated, and creaked under the scalpel.

In the third case the disease commenced in the mediastinum, and invaded the pericardium and superior vena cava secondarily, the latter being obliterated by a hard cancerous concretion, which seemed to be a continuation of the tissue of the walls of the vein.

The fourth case reported by Bouillaud properly belongs to Bertin, and presents many points of resemblance to the above. The patient died of chronic pericarditis, and the pericardium formed part of a cancerous lardaceous tumor, developed between the layers of the mediastinum.

Two cases of encephaloid disease of the heart are reported by Prescott Hewitt.* In the first of these

* Medico-Chirurgical Transactions, vol. xxx, 1847.

the patient, aged forty years, had undergone amputation of the left foot on account of a tumor of an encephaloid character. He died six days afterward, and besides recent inflammation of the left pleura and pericardium, there was found in the right auricle a large growth, which, proceeding from the appendix, occupied the greater part of the cavity of the auricle, and, passing through the auriculo-ventricular opening, projected into the ventricle, reaching nearly to the basis of the columnæ carneæ of the valve. The structure of this growth resembled exactly the encephaloid disease of the foot. No carcinomatous disease was discovered in any other part of the body.

In the second case the patient, a female, aged fifty-nine years, was admitted to the hospital for a cancerous tumor of the right breast. This tumor was not interfered with, and increased in size, ulcerated, and became fungous, until about six weeks after her admission, when she was suddenly attacked with urgent dyspnœa and partial syncope, the pulse at the wrist being scarcely perceptible. These symptoms increased, and she died on the following day. At the examination of the body the tumor of the breast proved to be of a decidedly encephaloid nature. Several of the absorbent glands were affected, and a tumor was found in the left rectus abdominis. The lungs were healthy, but the heart was enlarged by dilation of its cavities, chiefly of the left auricle. The auricular surface of the mitral valve was, for the greater part, covered by a soft pinkish deposit of an encephaloid character. This species of vegetation projected for some distance, both into the auricle and

into the ventricle, running along the surface of the tendinous cords, and covering the extremities of the muscular columns; and by it the auriculo-ventricular opening was all but clogged up, there being merely an opening of the size of a quill left for the passage of the blood. No encephaloid disease existed in any other part of the heart or in the abdominal viscera.

Carcassonne* reported a case of cancer of the heart as far back as 1777, but the patient had suffered for several years from syphilis, and the description of the cardiac lesions would lead us to consider them as dependant upon the venereal rather than the cancerous disease.

Billard† states that he found three scirrhus masses in the cardiac walls of an infant only three days old, which he describes as cancerous, but which Lebert considers to have been the result of hereditary syphilis. Velpeau‡ and Cruveilhier§ each report a case of encephaloid disease of the heart, and in both there was cancerous disease of other organs.

Of the above eighteen cases thirteen were encephaloid, two scirrhus, two polypiform, and one gelatiniform. In ten cases cancer was found in other organs besides the heart, in three the heart was the only organ affected, and in the remaining five the report does not state anything the one way or the other. In six cases the walls of the right side of the heart were diseased, in

* Mémoires de la Société Royale de Médecine, 1777, 1778.

† Billard, *Maladies des Enfants*, p. 734. Atlas pl. 8.

‡ Velpeau, *Exposition d'un Cas Remarquable de Maladie Cancereuse*. Paris, 1866.

§ Cruveilhier, *Anat. Path.*, liv. 29, pl. ii and iii.

five both the right and the left side, in five the pericardium and in one the endocardium was implicated, and in one the disease followed the course of the coronary vessels.

ART. III.—*Case of Trichinosis.* By E. C. SEGUIN, M.D., late Resident Physician New York Hospital.

J. B—, a grocer's clerk, aged nineteen years, was admitted into the New York Hospital, service of Dr. Thomas F. Cock, June 19, 1867, suffering from anasarca. The patient stated that he had been ill three weeks, and that during the first ten days he had suffered from violent vomiting and diarrhœa, followed by great debility and by dropsy. On admission, he appeared extremely anæmic; the œdema was so remarkably elastic that pitting could only be produced upon the legs; the tongue was clean, smooth, devoid of epithelium, and in its anterior part disposed to dryness; the stomach was still irritable, he said, but he managed to retain at least one meal a day; during the past few days constipation had succeeded to the previously relaxed state of the bowels; the pulse was weak, small, and beating about 112 times a minute; respiration was normal; and there was no increase of body temperature. The urine was at once examined, and found to be of a pale color, of normal specific gravity, and perfectly free from albumen. The patient was ordered four ounces of sherry wine, milk diet, and a few grains of the ammonio-citrate of iron in tincture of cinchona. My suspicions that the case was one of trichina disease

were strengthened by the negative result of the urinary examination. Direct questioning elicited the fact that considerable muscular pain and soreness had been experienced during the second and third weeks of illness; and that previously to the attack he had been in the habit of eating half cooked ham in sandwiches, and also of occasionally cutting off small pieces of raw ham in the grocery and eating them.

On the 28th the patient had gained a little strength, vomiting having only occurred a few times. Eggs and milk had been eaten, and six ounces of wine drunk daily. The tartrate of potassa and iron had been substituted for the citrate, as a chalybeate less likely to disturb the stomach. Repeated examinations of the urine had been made with uniformly negative results. On stating to Dr. Cock my reasons for venturing a diagnosis of trichinosis, he very kindly gave permission to resort to the proving examination. The patient readily and intelligently gave his consent. Localized anæsthesia was produced by means of ether and Richardson's apparatus, and a small portion of the deltoid muscle was removed. On tearing apart the muscular fibres in diluted glycerine and looking at the preparation with a half-inch objective, ten or twelve living trichinæ were seen. The cysts were very distinct, located in the muscular substance, their perfectly limited rounded ends beginning to become opaque from granular deposit. About their extremities were masses of fat globes and cells. The trichinæ which were still inclosed in cysts, presented a constant vermicular motion; while those which were free in the liquid of the prepa-

ration were so active as at times to leave the field (a narrow one) at one jump. These movements were retained by the trichinæ thus prepared for four days.

It was Dr. Cock's opinion that as all symptoms of intestinal irritation had ceased, and as it might be presumed that the parasites had all reached a muscular lodgment, there were no indications in the case excepting to feed the patient carefully and to give him iron cautiously. This plan was carried out, and slow improvement was observed daily, in color and strength; the swelling disappearing rapidly from all parts excepting the legs.

August 13.—The patient, although still pale, is discharged cured.

It is to be regretted that the duties of the hospital were so pressing upon the resident staff as to prevent the proper inquiries and examinations so essential to the completeness of such a case.

ART. IV.—*Cases of Ovarian Tumor.* By SAMUEL MITCHELL, M.D., of Cameron Mills, New York.

SPONTANEOUS SUBSIDENCE OF AN OVARIAN TUMOR.

IN the fall of 1858 I was called into an adjoining town some twelve miles distant to see Mrs. C., aged about forty years. Found her with a large tumor occupying nearly the whole abdominal cavity. It was multilocular, and of a rather more than usual hardness. As I learned the history of the case, it had been between one and two years in attaining its present size; when first

discovered was about the size of an egg, and situated in the region of the right ovary. During its growth it was attended with but little pain or tenderness, except after performing some unusually hard labor. Her general health seemed but little impaired. I diagnosed it as an ovarian tumor, and declared my conviction that it was incurable by medical treatment. The patient was courageous, and asked as to the probable chances of a successful operation for its removal. A correspondence was opened with Dr. Frank H. Hamilton, then of Buffalo, which resulted in his visiting the patient December 8, 1858, with the view of performing the operation of ovariectomy, if deemed best, after a personal examination. After a careful examination of the case, in view of the comparatively comfortable state of health of the patient, the inestimable value that a few years of life would be in rearing her family of little girls, and of the great risk necessarily attending the operation, he decided not to operate. I have seen her occasionally since that time. There was a steady increase in size of the tumor until within the last two years. It got to be very burdensome from its great size and weight. The only way she could keep about was by wearing a strong bandage with shoulder-straps. She continued to have fair health, has never been tapped or taken any medicine for it. A few weeks since I met her in the street, not having seen her for nearly two years. She was so much diminished in size I was quite uncertain about her identity. I learned upon inquiry of her that she had ceased to menstruate within two years, since which the tumor

had steadily decreased in size, and was now about the size of a small child's head, quite hard, and rather firmly fixed. She has no pain, and says she is well, and is doing her own housework. She added, "Tell Dr. Hamilton I have lived to raise my girls, and to see them happily married and settled in life, and I am feeling better than when he so mercifully spared me the operation."

The points of interest in this case are the length of time it has continued, and the fact of the gradual and great diminution in size of the tumor after the cessation of the menses.

SPONTANEOUS RUPTURE AND CURE OF OVARIAN TUMOR.

Mrs. J., aged thirty-nine, and the mother of several children, miscarried some time in July, 1865, after which she continued in frail health. I was called to see her the last of October. She had complained of almost constant pain and tenderness in the region of the right ovary for some time. At the time of my visit there was considerable febrile excitement, and so severe pain as to require a large amount of anodynes to control it. By an external examination, a firm and hard tumor two or three inches in diameter, quite tender to the touch, was discovered, apparently attached to the right ovary. She continued in very poor health, with much pain and tenderness in the tumor, which slowly increased in size, until January 1, 1866, when the pain and tenderness gradually subsided, and she regained comparative health, and was enabled to attend to her usual household duties until the latter part of July following, when, after severe exercise, the

pain and tenderness returned in a greatly aggravated form, and the tumor much more rapidly enlarged. It now occupied the whole right abdominal region, and extended some distance past the mesial line into the left side, and reached above the umbilicus; was distinctly nodulated. August 11, was called in haste. Found that the tumor had burst through the *vaginal cul de sac*, and discharged a large quantity of a dirty-colored serous fluid, to the great relief of the patient. The discharge steadily decreased until the 28th, when a free discharge of offensive-smelling pus took place, which gradually ceased. September 21, the tumor opened by a small orifice at the umbilicus, which discharged first a thin greenish pus, gradually becoming serous. From this time the tumor steadily diminished in size, until January 1, 1867, it had totally disappeared, and the patient has been enjoying good health up to the present time, with no signs of a return of the tumor.

ART. V.—*A Case of Strangulated Hernia in which the symptoms continued after the reduction of the Tumor.* By W. L. WELLS, M.D., Howell, Michigan.

On the 5th day of March, A.D. 1867, I received a line from Dr. Haze, of Pinckney, requesting me to meet him at the house of a patient of his about twelve miles distant, for the purpose of performing an operation in a case of Strangulated Hernia. I found the patient upon my arrival suffering from hiccup and vomiting, notwithstanding the tumor had been reduced

nearly if not quite twenty-four hours. The case to us was a novel one. Neither Dr. Haze, Dr. Hassard, my assistant, nor myself had ever seen a similar one. We came to the conclusion that the sac had been returned with its contents, and that if he could bring it down again the sac might be retained and the intestine returned. The patient was requested to make the effort to bring the tumor back, which was attended with success in less time than we had anticipated. With my left hand I grasped the lower portion of the tumor, and by careful management succeeded in getting hold of a part of the sac containing a small quantity of fluid, enough to enable me to retain it, and with my right hand I reduced the intestine, upon which the patient exclaimed that he was better, and from that time none of the characteristic symptoms returned.

The above case I deem worthy of reporting from its singularity, and the means adopted for its reduction.

Reviews and Bibliographical Notices.

ART. I.—*Electro-Physiology and Therapeutics; being a Study of the Electrical and other Physical Phenomena of the Muscular and other Systems, during health and disease, including the phenomena of the Electrical Fishes.* By CHARLES E. MORGAN, A.B., M.D. New York: William Wood & Co. 1868.

THE brief preface to this volume, which tells us that the author died before it went to press, at once disarms hostile criticism in regard to questions of style. Dr. Hammond, who read the proofs, tells us that he did not feel at liberty to correct the numerous Germanisms

which exist on almost every page, and which often render the meaning singularly obscure. With this short reference to the form of the work, we dismiss the subject, regretting that Dr. Morgan was not spared to see the certain success of this remarkable volume. We have read in the past ten years every treatise of any note upon the subject of animal electricity. Some, like Duchenne's and Remak's, were devoted to individual views as to certain forms of electricity in their therapeutic applications. Others, like Du Bois Reymond's, were records of pure scientific research without practical inferences; while another class, like the feeble essays of Althaus, of Beard and Rockwell, and the garrulously absurd book of Dr. Garrett, were meant, as in the first case, to be only therapeutic, or in the latter, to set forth all the present knowledge on the subject, both as to pure science and as to therapeutics. The book last named is the worst of all, and displays the most comprehensive ignorance of every branch of the science in question; while even Duchenne's volume, great as are its merits, errs often in its scientific knowledge and in an utter inability to see good in anything which the author himself has not invented or discovered.

In the present volume we have for the first time a book on electricity, which is complete, thorough, and exact as to its scientific side, with the most practical condensation of present knowledge as to electric therapeutics.

It would be out of the question to analyze even the 675 pages which deal with the subjects of magnetism, statical or dynamical electricity, and electro-physiology, besides a number of minor and included topics. Suffice it to say that these subjects are treated so fully, and with such skill of scientific criticism, as to put the treatise at the head, nay far beyond any existing essay in the same direction. Adding only that every point is illustrated copiously with well drawn diagrams and drawings of apparatus, we shall prefer to pass at once to the chapter on electro-therapeutics, which we propose to discuss at some little length.

Dr. Morgan tells us first, that nerve or muscle may be stimulated by brief shocks of the Leyden jar, by the magneto-electro-motor(induced currents), by interrupted galvanic currents, or by constant galvanic currents. He then formulates the effects of induction currents thus: Two terminals of an induction apparatus being placed on the body at any distance, the currents move through the intervening tissue in curves which converge toward the two points of application. At any point in their course the quantity is the same, but the current density and the consequent stimulation will be greatest the nearer we come to the electrodes. He then refers to Duchenne's mode of affecting the skin nerves by dry conductors and the muscles by wetted ones; and explains the best method of effecting these ends. He differs somewhat from Duchenne in preferring always to act on the muscle through its nerve. To effect this, a large wet conductor is to be placed on the skin near the muscle, and a small point conductor placed firmly over the entrance of the muscle nerve which we wish to stimulate. The next fact which he mentions is new to us. "It has been shown," he says, "that all other things being equal, stimulation due to induction currents is greater at the cathode, i. e., where the current leaves, than where it enters the body, as at the anode. Therefore the small electrode (or the brush) when we act on the skin must be connected with that end of the secondary spiral which, during the opening induction current, as electrolysis shows, acts as the cathode."

When currents of equal power are directed upon the various muscles of the body, it is found that they do not contract with equal force. Dr. Morgan thinks that this is due, not to differences in electrical sensibility, but to the different thicknesses of the skin and the subcutaneous areolar tissues, which acting as accessory circuits must largely modify the result. This is assuredly an incorrect opinion, because it is not uncommon to find muscles symmetrically placed, one of which will move under a current such as does not disturb the

other. Dr. Morgan does not anywhere refer to the reflex motions caused by electricity in antagonist groups of muscles, or to the disappearance of this when the paralyzed muscles recover their tone.

The constant galvanic current does not affect nerve or muscle unless very strong or of fluctuating density, whereas it stimulates the nerves of sensation readily, especially at the cathode, causing, like the induction currents, anæmia and then hyperæmia from vascular palsy.

Dr. Morgan discredits most of Remak's novel views as to the galvanic current, a verdict with which electro-therapeutists will generally agree. At the same time he is credited with the discovery that galvanism will excite muscular contraction in some cases where induction currents fail. The main facts in this direction our author has given in condensed shape as follows:

First. Paralysis in which neither the will nor either form of electric current act on the irritability of the nerves and muscle.

Second. Where the influence of the will is in part preserved or restored, and yet neither the constant nor yet the induced current can irritate the diseased muscles or motor nerves.

Third. Where, though the will has lost all power, the two forms of electric current still act, although with less energy than usual.

Fourth. Where both the will and the induction current are ineffective, whilst the constant current still stimulates. In this last case we find:

I. During the absence of motility, that 1. The constant current is so much more effective, that battery currents, which, from their feebleness do not excite the trace of a contraction in the same muscles whilst healthy, now give rise to energetic contraction.

2. As the treatment progresses, this power of the constant current rises rapidly to a maximum and then sinks.

3. This increased irritability for the constant cur-

rent is not the same in all branches of the paralyzed nerves, rising more rapidly, and sinking later in the less than in the primitively more irritable branches.

4. The contraction excited by the battery-current in the paralyzed muscles is not as rapid as that excited in healthy muscles.

5. In many cases we do not get this contraction by stimulating the motor-nerve, but by acting on the muscle itself.

II. As motility returns: 6. The irritability for the constant current gradually disappears as that for the will and induced currents generally rises: or that for the will alone is restored, and only months or years afterwards does that for the two kinds of electric current return gradually and equally to the norm.

7. That for the induced current returns, it is true, but weak, and is only seen in direct stimulation of the muscle; and the last is true of the constant current, which acts, however, more energetically on the paralyzed than on healthy homonymous muscles.

8. That for the induced current does not return (at least for the present) whilst that for the constant current remains unchanged.

After reminding us that feeble muscles may be hurt by too severe electrization, Dr. Morgan proceeds to show why it is that the two electricities vary so much in their influence upon muscles, an explanation too long to quote but except for some obscurity of language, very excellent. It is these clear adaptations of scientific results to explain empirical practice and often to justify it, that gives peculiarity and value to much that Dr. Morgan has here written.

The plates which, with their explanatory text, come next, will be found useful to those not already familiar by practice with the entrance points of nerves into muscles.

Descriptions of the treatment of aneurism by electricity, electrolysis of calculi, galvano-cautery, etc., complete this chapter, which is the last in the book,

and will cause the reader to lament that its accomplished author has not lived to reap the honors which his great ability has won.

It is one of a class of books very rare in this country, and whose mere publication is a hopeful sign for that scientific future, which had he lived, Dr. Morgan would certainly have illustrated.

ART. 2.—*Pennsylvania Hospital Reports*. Vol. I. 1868.

Philadelphia: Lindsay & Blakiston. 1868. 8vo., pp. 420.

This, the initial volume of a series of Reports which we are promised will be published annually, opens with a paper by Dr. Meigs, entitled "The Pennsylvania Hospital, and Reminiscences of the Physicians and Surgeons who have served it," but which it appears to us would have been more appropriately styled "A Lament for the departed worthies of the 'honorable and ancient' Pennsylvania Hospital, with a plea for the good old practices of Botalli, Guy Patin and others, centuries since." And then we may mildly venture to suggest that had the author adopted his own favorite classical style and simply signed himself *laudator temporis acti*, his time-honored name and justly deserved reputation would have been no loser thereby; but better still in our estimation would it have been to have omitted the article altogether.

The opening chapter of the book proper is on "Laceration of the Female Perineum, its History and Treatment," by D. Hayes Agnew, M.D., and is a carefully prepared and complete survey of the whole subject. Mr. Baker Brown's and the author's operations are described in detail, and ten cases are narrated of successful treatment of this distressing affection. Appended to the paper is a report of the literature of the subject, making altogether a most admirable monograph.

Dr. Forsyth Meigs's paper on the "Morphological Changes of the Blood in Malarial Fevers," is a sum-

mary of his examinations of the blood in one hundred and twenty-three cases of malarial disease. Although these observations sustain the generally received opinion that pigment matters are found in the blood more constantly in malarial than other diseases, a diagnosis cannot safely be based upon an examination of the blood from the peripheral vessels, inasmuch as no traces of the pigment-matter may be found here while it exists abundantly in the visceral capillaries. The practical value of Dr. Meigs' paper is in his summary of the treatment: "None of the cases were bled;" "mercury was scarcely employed at all;" "no drastic cathartics were allowed." His protest against these debilitating agents is manly, and sustained by the experience of all who by reason of their freedom from adherence to an idea are qualified to give a candid opinion.

Dr. Addinell Hewson contributes the next article, on "Acupressure." Although his estimate of the value of this plan of treating cut arteries might seem extravagant to those not familiar with the practice, we are disposed to agree with him wholly, and to consider his position fully warranted by the results already arrived at, both here and abroad, in the hands of those who have fairly tested the operation.

Dr. Hunt gives an interesting case of large artificial anus following gunshot wound, in which, however, the various measures, palliative and objective, resorted to proved unsuccessful. The opportunity was improved of performing some physiological experiments upon this patient, from which it is apparent that the cæcum and large intestines are merely passive receptacles of the excrementitious results of the digestive processes, and that they are wholly devoid of sensibility (on the inner surface), and of digestive and absorbent powers.

The next paper is by Dr. Da Costa, on "the Action of Narceine." His experience with this agent leads him to place very little value on its efficacy as a specific or anodyne; indeed in the doses in which morphia is

usually prescribed the agent (narceine) is totally destitute of either of these properties, while in larger doses it is uncertain, and often palpably inert. Every care and precaution were taken in Dr. Da Costa's experiments to avoid all sources of error, by reason of impurity of the drug, idiosyncrasy of the patient, etc. In the few cases in which we have seen it employed, the results were quite as unsatisfactory as in Dr. Da Costa's patients.

Next in order, Dr. T. G. Morton furnishes a valuable statistical paper, "A Review of the Ligature of the large Arteries at the Pennsylvania Hospital, between the years 1835 and 1868." The number of cases is not large, (only seventeen,) but their record is well made.

Dr. Hewson contributes a case of Aneurism of the Arteria Innominata, illustrating especially the principle of Mr. Wardrop's operation. The very summary manner in which this operation is disposed of in the systematic text books and annuals of surgery, Dr. Hewson thinks is due to an ignorance or non-appreciation of the really philosophical principles on which it is based.

A paper by Dr. Gerhard on the Treatment of Continued Fevers, is a very judicious survey of this subject, and well worth a little study by those who are too much disposed to attack this class of cases, as if the disease were an entity to be driven out by prompt and powerful measures. The paper appears to us a most gentlemanly and well-timed protest against the spoliative plan of treatment, which is still the favorite teaching of too many of our authorities, and notably those of Philadelphia.

Of the remaining papers in this volume, the most noticeable are those by Drs. Rhoads and Pepper, on "Fluorescence of the Tissues," and on "Locomotor Ataxia," by Dr. Hutchinson. Dr. Andrews, in his paper on "Penetrating Wound of the Skull," has shown an immense amount of industry in collecting

cases from various authorities. It is only to be regretted that some profitable results cannot be deduced from such an expenditure of labor. The other papers are principally reports of short cases, many of them occurring in private practice, and of no special value. While the volume, as a whole, contains much valuable material, it does not come up to the standard of what such Reports should be; but we congratulate the editors and contributors on having taken the initiative in publishing these reports, the first from any American hospital, and we shall look for an advance in the character of subsequent issues which will place our own reports quite on a level with those from Guy's or St. Bartholomew's, for no one can doubt that we have sufficient material at hand on which to base such reports.

The publishers' work has been very creditably performed.

ART. 3.—*Mechanical Therapeutics. A Practical Treatise on Surgical Apparatus, Appliances, and Elementary Operations, embracing Bandaging, Minor Surgery, Orthopraxy, and the Treatment of Fractures and Dislocations.* By PHILIP S. WALES, M.D., Surg. U. S. Navy. 642 Illustrations. Philadelphia: Henry C. Lea. 1867. 8vo. pp. 685.

The first part of Dr. Wales' book, 219 pages, is devoted to what he calls the "Apparatus of Dressing," and he must be a blockhead indeed who, after studying this portion of the book before us, fails to adapt himself to the emergency of any case, for we find here described pretty much every contrivance ever devised, and we can hardly conceive of that combination of circumstances which would deprive us of all these means of assistance, and the absence of one or more of the usual aids would only stimulate the ingenuity to devise some other plan of relief. The only danger to a student is that in the multiplicity of aids which Dr. W. has indicated he may

become bewildered in the very choice of his methods, and therefore what is really an excess of knowledge might be taken for embarrassment, or, still worse, ignorance. The chapters on Topical Applications and the Use of Water Dressings and on Bandaging are especially valuable and instructive. Some 86 pages are devoted to the subject of Bandaging, comprising all the special systems and varieties of bandages, and giving careful instructions as to the mode of application to all parts of the body. These instructions are for the most part readily understood, but in many of the more intricate bandages require a strict and careful attention to the language employed to make them intelligible. Some portions of this part of the book, we are inclined to think, might have been omitted without detracting at all from its practical value; but, taken as it is, we know of no better condensation of the whole subject of surgical dressings than is here found. Indeed, in our estimate, it is the most valuable portion of the book.

Part II is taken up with a consideration of the various mechanical appliances used in the treatment of the deformities or deficiencies of the body. The introduction of this subject in anything like completeness into a manual of Minor Surgery is something of an innovation, as we usually find the subjects here treated of reserved for the treatises on Orthopædy or Orthopraxy, or whatever you choose to call it, and where, too, we shall usually find such books are mostly an endorsement of the author's own special apparatus and a vilification of others. As Dr. Wales has not devised a single one of the appliances considered in this hundred pages of his book, we may at all events consider his opinions honest. The importance, too, of the subject, and the knowledge that many deformities may be remedied by proper treatment at the earlier stages, especially in childhood, are a warrant for this departure from the ordinary course of authors. The claims of American ingenuity and talent in this department are

fully recognized, and yet are not put forward in a boastful manner. In describing the apparatus for remedying the loss of parts, a difficult task necessarily presented itself on account of the multitudinous devices and inventions for this purpose, but the author has settled the difficulty by describing only the best known, and confessedly the best adapted of such apparatus. Thus under Artificial Legs he contents himself with a description of the common socket and stump legs, and then of the more complicated inventions he selects Bly's, Kolbe's, and Palmer's as the acknowledged models. Dr. Davis, of this city, is credited with having first systematized the application of extension without confining the patient to recumbency, in cases of disease of the hip joint. The successive improvements on his apparatus by Sayre, Taylor, and others, are also given at length.

Part III takes in the consideration of Fractures, their Reduction, Dressing, and Apparatus. The first chapter is devoted to a general consideration of the subject, comprising the classification, causes, frequency, symptoms, mode of repair, and the general treatment of fractures. In these few pages the author has condensed much valuable material, and his instructions as to simplicity of apparatus and reliance upon materials easily accessible are very judicious. In the following chapters special fractures are considered, and so many different apparatuses are introduced and illustrated that, as a rule, the very abundance of the aids offered to us serve only to perplex, unless we have previously some well defined notions of our own. And here is the greatest objection we have to make to Dr. Wales' book. It would have been more valuable to the student had there been less of it, and that more positively stated. We are surprised to see in the chapter on Fracture of the Clavicle no mention made of the simple plan of treatment by adhesive plaster. In children, especially, we have found this plan the most satisfactory of any, and with double or canvas

plaster perfectly durable. The interdental splint of Dr. Beans, of Atlanta, Ga., for fractures of the lower jaw, is described, the author apparently being unaware that this plan was devised and described by Dr. Gunning, a dentist of this city. The numerous cumbersome and inefficient devices for retaining in apposition the fragments of a fractured lower jaw are destined, we firmly believe, at no distant day, to be entirely discarded in favor of some form of the interdental splint. We are unable for want of space to go through this portion of the book, suffice it to say we find here described everything good, bad, or indifferent, especially in the section on fractures of the thigh and leg; and while the worst are not sufficiently condemned, the best are not enough praised. Other things being equal, it will generally be admitted that the simplest apparatus is the best; and if, therefore, with the simple devices of Buck and N. R. Smith, we can accomplish the same results as with the more intricate apparatus, we think we have no room for any difference of opinion. We assert most unqualifiedly that the results obtained with these simple appliances are fully equal to those derived from the more complicated kinds, and any one who chooses to look into the question himself can any day at the New York City and Bellevue Hospitals see plenty of cases which will substantiate this assertion. Indeed, in the latter institution we have seen several cases treated without any splints whatever, and with as perfect results as we have ever witnessed.

Part IV is devoted to the consideration of Dislocations, their Reductions, Dressings, and Apparatus. The whole subject is well handled and described with sufficient minuteness, while the author is freed from the embarrassment which surrounds him in the two previous parts of his book, by reason of the fact that there is here less room for the use of mechanical appliances, and hence the line of operative procedures from which his material is drawn is much smaller.

The value of the application of continued elastic ex-

tension in the reduction of dislocations, as developed by Dr. H. G. Davis, of this city, is here fully acknowledged and credited. The absurd claims of Dr. Davis, put forth in his recent work "Conservative Surgery," that the profession have never recognized his principle, are not true, as we see in the instance now before us, and in a number of other cases to which we have had occasion to call the attention of our readers.

Part V closes the book with a very lucid and well-arranged description of the minor operations of surgery. It covers the whole ground of the every-day operations in surgery, which the general practitioner may at any time be called on to perform. It is, with the first part, the most satisfactory and valuable portion of the book. The profuse illustrations which accompany it make intelligible to the eye many operations and apparatuses without the necessity of reading the description of the same. These illustrations are like the materials of the book, drawn from all sources, and perhaps the most distinctive feature of the volume is that it is a resumé of all that is worth knowing and a good deal that is not worth knowing of the important questions and operations of every-day surgery.

ART. 4.—*Lectures on the Diseases of Women.* By CHARLES WEST, M.D., etc., etc. Third American, from the third and revised English edition. Philadelphia: Henry C. Lea. 1867. 8vo. pp. 543.

Clinical Notes on Uterine Surgery, with special reference to the Management of the Sterile Condition. By J. MARION SIMS, A.B., M.D., etc. New York: William Wood & Co. 1866. 8vo. pp. 401.

Traité Pratique des Maladies de l'Uterus et de ses Annexes, considérées principalement au point de vue du Diagnostic et Traitement, contenant un Appendice sur les Maladies du Vagin et de la Vulve. Avec 240 figures intercallées dans le texte. Par A. COURTY,

Professeur de Clinique à la Faculté de Médecine de Montpellier. Paris: 1866. 8vo. pp. 1088.

A Practical Treatise on the Diseases of the Uterus and its Appendages, and chiefly in respect to Diagnosis and Treatment; with an Appendix on the Diseases of the Vagina and Vulva. By A. COURTY, Clinical Professor at the Medical Faculty of Montpellier. Paris: 1866. 8vo. pp. 1088.

Uterine Disorders: their Constitutional Influence and Treatment. By HENRY G. WRIGHT, M.D., M.R.C.P., etc., Physician to the Samaritan Hospital for the Diseases of Women. London: John Churchill & Sons. 1867. 8vo. pp. 268.

The Diagnosis, Pathology, and Treatment of Diseases of Women, including the Diagnosis of Pregnancy. By GRAILY HEWITT, M.D., Lond., F.R.C.P., Professor of Midwifery and Diseases of Women, University College, and Obstetric Physician to the Hospital, etc., etc. First American, from the second London edition, revised and enlarged. With one hundred and sixteen illustrations. Philadelphia: Lindsay & Blakiston. 1866. 8vo. pp. 707.

A Practical Treatise on the Diseases of Women. By T. GAILLARD THOMAS, M.D., Professor of Obstetrics and the Diseases of Women and Children in the College of Physicians and Surgeons, New York; Physician to Bellevue Hospital, etc.; with two hundred and nineteen illustrations. Philadelphia: Henry C. Lea. 1868. 8vo. pp. 609.

It was well remarked by a contemporary, a few years since, on noticing some recent works on the Diseases of Women, that "truly astonishing is the amount of attention given in the present day to the subject of female diseases. Whatever the ladies may in other respects have to complain of on the part of the stronger sex, neglect of the study of the numerous diseases they are liable to cannot be laid to our charge; for in this

respect a species of gallantry has arisen which is exuberant in its growth and most industrious in its application." * By the list of several of the latest and most noteworthy publications on the subject at the head of this article, it will be seen that there is no abatement in this species of gallantry, nor less industry in our professional brethren of Great Britain, France, or this country; every year brings forth one or more books on gynæcology, and

"Scarce one is gathered
Ere another grows."

Numerous and diligent as the laborers in this field have been during the past half century, the question of substantial cultivation is at least an open one. In no branch of medicine have principles been so set aside, the laws of life and morbid changes more unheeded, and set-theories held shifting sway. Amid "the ringing grooves of change," and the angry clash of discordant opinions, the student is bewildered and discouraged, and has too often come to accept irrational routine in the place of an enlightened practice. Nor do we believe that the growing tendency to segregate uterine diseases, and erect them into a specialty, will tend to better the evil or lessen the confusion. The natural drift of the specialist is towards one-sidedness and bigotry. "Specialism," observes Professor Courty, "is the lowest degree of art when it is not fertilized by general knowledge; it is the highest when it is the cap-piece of science. We should finish instead of beginning with it." (p. xvii.).† Another writer well remarks: "Elaborate cultivation of one small plot in the field of medical science need not constitute the laborer a specialist, so long as his work is openly and honestly done. Diseases of the womb obey the same laws, and are just as amenable to rational treatment as diseases of other organs of the body, neither more nor

* British and Foreign Medico-Chirurgical Review, vol. xxxiv, p. 29. 1864.

† See this Journal, vol. v, p. 519.

less so." (Wright, p. ix.) Such cultivators of any particular department have lately been sneeringly and flip-pantly styled "especialists;" but there is good teaching right betokening in the word, though spoken as a sorry gibe.

Much of the confusion, and many of the notable errors, both in the pathology and treatment of uterine diseases, are due to the unreasonable exclusiveness of the doctrines, and unseemly controversial temper of modern writers. On these points the English and French schools have been, and still are, to a great degree, in direct antagonism; the former looking upon all uterine disorders as "a fragment of a constitutional malady," while the latter see chiefly, if not alone, the local ailment, and rate the systemic derangement as secondary and reflective: hence the great prominence given to local treatment. We are persuaded with Dr. Wright, that to be a successful practitioner of gynæcology, "all constitutional causes producing disorder should be investigated, all the teachings of physiology and general pathology held in mind, and all the extended knowledge of the influence of remedies and of hygienic medicinal methods laid under contribution, in order to arrive at a correct diagnosis and to insure a good result from treatment."

I. An old and valued friend is to be welcomed in Dr. West's "Lectures." Full of research, and as the mature teaching of a thorough, ripe and conscientious physician of great experience, they should be read, learned and digested by every one interested in the diseases of women. In this edition the whole work has been carefully revised, and the chapters on Uterine Hæmatocele and Ovarian Disease are recast. Lectures I and II, on Symptoms, etc., and VII and VIII, on Inflammatory Affections of the Uterus, with an examination of the different opinions on this vexed question, are particularly worthy of attentive study. Where, however, there is such uniform excellence, it is difficult to single out any particular portion; and the fact that

this edition is the third of the American reprint shows how truly the profession in this country have valued the work, which must long keep its place as one of the soundest, most attractive and completest books on the subject.

II. In Dr. Sims's "Clinical Notes" we have a plain record of personal experience, learned in a field offering extraordinary opportunities, which have been profitably utilized. The work is essentially original, giving the author's own views and practice, and, therefore, necessarily one-sided and dogmatic, and yet not unpleasingly so, and it wins respectful attention by its evident directness and honesty of purpose; borrowing Montaigne's words, we may say of it, "*C'est icy un livre de bonne foy.*" It treats exclusively of uterine handicraft, and we are certainly called on to admire the remarkable mechanical aptitude, ingenuity, and operative tact of the writer. His fertility of invention and cleverness at adaptation are wonderful. The sections on the mode of conducting uterine examinations, the methods of correcting the several misplacements, the use of sponge tents, the surgical treatment of procidentia, elongated and enlarged necks, and strictured mouths, abound with proofs of contrivance and handiness quite remarkable; and upon all these subjects the reader will find a large amount of useful and novel information.

Dr. Sims's well-merited professional position, and his great experience, give him a claim to write with authority, and his opinions must always have weight; yet we cannot help warning the young practitioner against accepting all the teachings of this book to their fullest extent. Dr. Sims is a decided partisan of what may be styled the "immediate method" of treating womb disorders. The procedures described are so taking, the relief promised so immediate, the success stated as so certain, and the risk apparently so slight, that there is great danger in the novice instantly and indiscriminately resorting to them. We would suggest extreme caution and discernment, to ensure a safe or happy issue.

Looking upon this volume, with the above reservation, as one of the most valuable contributions lately made to gynæcology, and in many respects in the direction of progress, and calculated to have no little influence, we the more regret the introduction of irrelevant matter of doubtful taste and propriety, and which, we fear, may so heavily handicap it, as to seriously hinder, both in this country and Europe, the success which from its real merits it deserves.

III. French medical literature has been singularly fertile in contributions to gynæcology, both in the form of elaborate treatises and monographs upon special subjects; yet, if we examine critically into the real merits of most of those published within the past hundred years, even of those which have had most notoriety, we shall find their claims to enduring reputation and their practical value small. Most of them were written under the influence of some fashionable theory, and their authors have sought rather to establish a dogma, or demolish an adversary, than to seek after truth, and settle pathogenetic and therapeutic principles. Astruc's voluminous *Traité des Maladies des Femmes* (1761-65) is remarkable in many respects for the time when it was written, but it shows more the bookwright than the practitioner. The classical work of Mme. Boivin and Dugès, (*Traité Pratique des Maladies de l'Uterus et ses Annexes*), must always have a certain value. It has many original observations, is just in its critical appreciation of the labors of others, and sound and sensible in much of its teachings. Of the other innumerable works on the Diseases of Women since published by Frenchmen, the flimsiest is undoubtedly that of Colombat, (De l'Isère) translated some years since into English by Dr. C. D. Meigs, of Philadelphia. Among the most recent ones, there are the *Traité Clinique* of Becquerel, (1859,) the *Traité Pratique* of Nonat, (1860,) the *Leçons Cliniques* of Aran, and the *Clinique Médicale* of Bernutz and Goupil, (1862.) Becquerel's work is a compendium, badly arranged, and without practical

authority ; that of Nonat, clinically familiar with his subject, has many chapters of value, treating largely and well of questions of importance to which attention had but lately been directed, but giving too great prominence to inflammation as a pathogenetic factor in uterine disorders ; while Aran, whose work was unfinished at the time of his death, and which in many respects it admirable, is nearly as one-sided, in attempting to restore to congestion the nearly universal part Lisfranc would have had it play in diseases of the womb. The series of collected monographs of Bernutz and Goupil, lately translated for and published by the Sydenham Society, is made up of original observations, and as a record of cases may be consulted with advantage ; but the didactic value of the volume has, we think, been greatly overstated.

There was room therefore for such a work as that of Professor Courty, which undertakes to give the current doctrines, main facts, and practice of gynæcology. The author is well and favorably known by his contributions to ovology and practical surgery, and worthily holds the Clinical chair in the Medical Faculty of Montpellier, formerly illustrated by Delpech. The *Traité Pratique* shows industry, research, and practical knowledge, freedom of bias of any particular school, and fair appreciation of the labors of other cultivators of the same field both at home and abroad, while their opinions are examined and discussed with candor and moderation. As all systematic works of his countrymen, it is overweighted with "loads of learned lumber," and is needlessly minute and copious with wearying iteration. Like our friend Mrs. Gamp, there "is too much crumb." Judiciously reduced to one half its size—it is a large octavo of over one thousand closely printed pages—and with a more scientific arrangement, its value would be proportionately increased. It will, however, be always a valuable book of reference, and may be consulted with profit by all interested in the diseases of the uterus and appendages.

Pathology hardly holds the place it should in so elaborate a work, and its Therapeutics are not very satisfying or positive. Though the necessity of joining general with local treatment in managing womb complaints is owned, yet we could wish that when the constitutional means to be used in individual affections come to be indicated, they had been less vaguely set forth. Prof. Courty shows a strong leaning toward hydrotherapy as a curative agent, in this respect following Aran, who named it in such cases a *general reviver*, (*remontement général*.) A large part of the good effects of this medication are due, we are satisfied, to its action on the skin, restoring and keeping whole its functions. Baths and friction regularly and systematically used, should hold a prominent place in uterine therapeutics.

Our space will only allow us to cast a glance over the volume, and briefly indicate in a general way its contents.

An interesting and well written critical bibliographical introduction is followed by a section upon the anatomy and physiology of the uterus and its appendages, which is a very thorough resumé, and will repay a careful study. Section II treats of the Diagnosis of uterine disorders in general, chapter first comprising the presumptive signs, general and local, and chapter second the actual signs furnished by direct exploration, as abdominal palpation, the touch, speculum, uterine catheterism, and the supplementary means, as the endoscope, tents, etc. Both chapters are quite complete. Section III is devoted to the treatment of uterine diseases in general, including chapter 1, the indications to be fulfilled, chapter 2, the various methods and indications, and chapter 3, the several means, general and local, to be employed in meeting the indications. This section is needlessly minute, with a good many worm-cankered saws, much busy or barren therapeutics, and makes unavoidable a good deal of repetition, when the treatment of particular disorders comes to be considered later.

Under the head of Special Uterine Disorders, Alter-

ations of Function are first considered, and here the whole subject of menstruation and its anomalies is discussed, with a chapter on Uterine Neuralgia, and another on Uterine Hæmorrhages. The next section is clumsily styled "On Morbid Conditions without Neoplasms," and is a real olla-podrida, for we meet here with flexion, congestion, engorgement, metritis, ovariitis and salpingitis, peri-uterine inflammation, leucorrhœa, hypertrophy and atrophy, granulations and fungosities, and ulcerations and ulcers of the neck of the uterus. In the section on Organic Alterations, fibrous tumors, polyps and moles, tubercles, and cancer are all elaborately treated of. The concluding section is headed "Diseases of the Appendages," and its several chapters are dedicated to pelvic hæmorrhage, peri-uterine hæmatocele, ovarian cysts and gerito-pelvic tumors, and sterility (!) An appendix on the Diseases of the Vagina and Vulva is a condensed and imperfect summary of the symptoms and treatment of these affections, except the chapter on vesico-vaginal fistula, which is quite full, and shows perfect practical acquaintance with the subject, Professor Courty having operated more frequently and more successfully for this affection than any other European surgeon, except Dr. Simon, late of Rostock, and now of Heidelberg. To Dr. Marion Sims he properly gives the credit of first making the operation for the radical cure of this infirmity a practical one, in which success is nearly the universal rule. After a full and fair-judging examination of the different methods of other surgeons and the several modifications of Dr. Sims's operation, he is of opinion, that all buttons, clamps, shields, and shot are not only unnecessary, but risk the result. He writes:

M. Sims, ai-je dit, est le premier qui ait imaginer ou du moins réglé l'opération en Amérique, et il l'exécute plus simplement que ceux qui l'ont suivi, particulièrement que son élève M. Bozeman. Je suis porté à croire, en effet, que M. Bozeman a gâté plutôt y' amélioré l'opération de M. Sims. Le changement de courbure apporté au spéculum n'est pas heureux. L'instrument perfectionné, si l'on veut, en ce qu'il de-

vient applicable à d'autres cas, semble être moins bien adapté à l'opération même de la fistule vésico-vaginale. La position de la malade sur les coucés et les genoux est plus incommode que celle qu'adopte M. Sims sur le côté gauche ou en demi-pronation. Les instruments ajoutés pour l'avivement, pour l'affrontement des lèvres de la plaie, pour la constriction des sutures, notamment la plaque de plomb et les grains de plomb perforés de la fameuse suture en bouton, compliquent l'arsenal du chirurgien et prolongent la durée de l'opération sans utilité réelle. (p. 1044.)

IV. Dr. Wright's "Uterine Disorders: their Constitutional Influence and Treatment," is the very opposite in scope and way of handling the subject to Professor Courty's Treatise. It is a compact substantial contribution to gynæcology of an observing, thoughtful and discerning mind, and merits solid success. It is the work of one who has not only read but mastered the whole literature of the branch, and examined, weighed, and searched for himself; and who has improved his large practical opportunities. The author says in his Preface:

As initiative to my personal study of the subject of diseases of women, I determined to work through its early history. This long and laborious task afforded certain curious and significant results . . . I have endeavored to turn to account the method which I early adopted for my own guidance. There is no disease without some foregone disorder; and the importance of discriminating the causes of disorder in its various stages, led to a recognition of the comparative value of remedies, to adopting the plan of treatment to the exigencies of each case.

It is only after a somewhat exceptional experience, and the study of notes accumulated from thousands of cases, that I venture to speak somewhat authoritatively on certain points yet in dispute, and to suggest various new methods of treatment in uterine disorder and disease. . . .

It is no part of the purpose of this work to discuss discrepancies of opinion. My endeavor has been to build up from sound materials a method of investigation which shall enable the varieties of uterine disorder and disease to be understood, distinguished, and treated according to the ordinary principles of pathology. (Preface, pp. vii, viii.)

And most successful has Dr. Wright been, to our notion, in carrying out his purpose. In some two hundred and sixty octavo pages, he has given concisely, in good English, and with rational dogmatism, the essentials of the pathogeny and treatment of uterine disorders.

In a preliminary chapter, quaintly but aptly styled "The Historical Disorder of Uterine Pathology," which was originally published in the *British and Foreign Medico-Chirurgical Review*, July, 1865, he shows conclusively that every one of the suggested means and measures of local investigation for which the French school has credit, was only a revival of the practice followed in ancient times. "Had this argument been strongly urged and upheld by the substantial evidence which a little research might have supplied, it is probable that less prominence would have been given to that exclusive use of local means of investigation which chiefly led to uterine disorders first being considered as a specialty." (p. 4.) The speculum, digital exploration, sponge tents, medicated pessaries, vaginal injections, the hip-bath, both plain and medicated, are all mentioned as ordinarily used in practice. Our author then treats of uterine disorders under three divisions, namely: those of place, function, and structure. We have space only to note his sensible remarks as to the pathogenetic part inflammation truly has in uterine disorder, and which is particularly important from its therapeutic bearing.

The decided opinions expressed as to the great frequency with which true inflammation and consequent ulceration affect the cervix uteri, have been chiefly remarkable because of the large variety of disorders, general and local, held to thus have a common explanation. It is hardly too much to say that almost every ailment which could affect the frame of woman, has been directly or indirectly assigned a significant relation to some occult condition of uterine inflammation.

When my attention was first specially directed to diseases of women, the controversy on this subject was at its height. The duty imposed on me necessitated the treatment, every year, of some thousands of cases of uterine disorder disease; . . . the broad theory of the constant presence of inflammation and ulceration, with the consequent invariable necessity for local treatment in order to effect a cure, attracted especial attention. The opinion I then formed has been strengthened by many years of close observation among patients in every grade of life, and under every variety of conditions. That true inflammation of the uterus occurs, and may affect any part of it, is indisputable; but it is a rare and grave affection. (p. 215.)

That the doctrine which narrows most of the morbid

changes to which the uterus is liable to inflammation and its consequences, is faulty, untrue, irrational and dangerous, we are satisfied, and it must pass away under a larger study and wiser appreciation of the causes of disorder, as it has in many affections of the lungs, liver, and kidneys. The orderly arrangement and exquisite adaptation of the uterine vascular supply as a means to an end, is marvellous, and this vascular balance may, and undoubtedly does, become deranged from mechanical and even vital causes, but the resulting conditions have, as a rule, nothing in common with what we are in the habit of believing to properly belong to true inflammation; and the history of such cases, their issue and the rational methods of cure, all go to prove this. Nutritional errors are the more common products leading to disordered textural conditions, which show themselves in the various local troubles we are called upon to treat; for nutrition and function are correlated forces, and the wholeness of the function measures and tells the life of the structure. Whatever may be the nature of the local ailment or its immediate cause, we should neither overlook or underrate constitutional influences, and the inter-relations of the several organs. We believe that a due concern for the general health, and a recognition of the mutual influences of the chief organs on each other, are essential to the successful treatment of womb complaints, and to their neglect is due much of the uncertain and profitless treatment of these disorders. Dr. Wright observes:

Due renovation of uterine structure requires that the general nutrition be in a healthy condition. If this be below par, the structure of the womb may just remain in a state which denotes arrest of the reparative changes; and with only negative results. As the fat and flabby heart represents a state of deficient renovation due to ineffective nutritive action, so the uterus, large, weak, and inactive, indicates deficiency of systemic power; and the general symptoms are explained by a condition brought under notice by one or other of those local disorders already mentioned. The patient may eat well, but what she takes is not turned to good account. She may be very plump and appear the picture of health; but the muscles are flabby, the heart has to labor when unwonted exertion in the least degree accelerates the current of the

blood; there is deficiency of power and of tone in every organ and structure, and the deposition of fat which plumps out the frame is rather an evidence of defective action than a sign of healthy condition. But there is an opposite physical state, no less important, where food, if taken at all, is not properly assimilated; where reparation is not effected because the conditions which ensure due renewal of tissue are not fulfilled. In these cases the women are thin, worn, and weakly. There is little energy for effort, but there is still less power to repair the wear and tear which effort implies. (pp. 222, 223.)

In our next number we shall notice the two latest works on the diseases of women, those of Dr. Graily Hewitt and Dr. Thomas.

Reports on the Progress of Medicine.

THEORY AND PRACTICE OF MEDICINE.

Prepared by E. S. DUNSTER, M.D., Physician to the Out-door Department of Bellevue Hospital.

(Continued from the last Number, p. 89.)

ART. 24.—*Hydronephrosis. Description of a Congenital Case, and Remarks on the Etiology of the Disease.* By Dr. ALEX. R. SIMPSON. [Glasgow Medical Journal, January, 1868.]

AN interesting article, with a very complete Bibliography of the subject.

ART. 25.—*Spermatorrhœa; A new Method of Treatment.* By CHARLES BLISS, M.D. [Boston Medical and Surgical Journal, January 30, 1868.]

Dr. Bliss advocates the use of bougies, the temperature of which is reduced by immersion in ice water to about thirty-eight degrees Fah. The bougies are at first used twice daily, and retained in the urethra for five or ten minutes. Three cases, very satisfactory in their results, are given. A more extended series of observations however is necessary to establish the true value of this remedial agency, the beneficial effect of which Dr. Bliss ascribes "to the local tonic and seda-

tive action of cold in allaying the irritability and overcoming the hyperæsthesia on which the continuance of the disease in most cases depends."

ART. 26.—*The Contagiousness of Cholera.* By Professor HENRY G. CLARK, M.D. [Boston Medical and Surgical Journal, January 23, 1868.]

Prof. Clark stoutly maintains, after a rigid definition of his terms, and a careful examination of the evidence on both sides of the question, "that not a single case, well attested, and clearly, completely demonstrated, of cholera transmitted by *contact alone with the person, clothing, or effluvia of another case, has ever yet been cited.*"

ART. 27.—*Clinical Lectures on Diseases of the Liver.* By CHARLES MURCHISON, M.D., F.R.S. [Lancet, March 16, 1867, *et seq.*]

A careful and condensed resumé of the various affections of this organ (the portions thus far published relating to enlargements,) especially valuable in the matter of differential diagnosis, which is given with great accuracy.

ART. 28.—*Gouty Bronchitis.* Clinical Lectures, by E. HEADLAM GREENHOW, M.D. [Lancet, March 9, 1867, *et seq.*]

Dr. Greenhow thinks that bronchitis in a large majority of cases is a secondary disease, i. e., arising out of some previously existing ailment or constitutional dyscrasia, prominent among which is the gouty diathesis. An analysis of ninety-six cases of bronchitis shows that in thirty-four, or more than one third, a distinct gouty history was attached either to the patients themselves or some member of their families.

ART. 29.—*The History of a remarkable Case of Chronic Pleurisy, with Treatment by Paracentesis and Injections (into the pleural cavity.)* By W. H. TRIPLETT, M.D. [Richmond Medical Journal, January, 1868.]

This case is interesting from its long continuance; from the large amount of fluids removed by the operations of paracentesis, and by subsequent drawings off, for at the second operation the external wound was made very large so as to leave a free communication with the external air; and from the tolerance manifested by the pleural cavity to the injection of various solutions, such as iodine, acetate lead, chlorinated soda, and sulphate of zinc. Before these injections were used the cavity was freely washed with the warm water and Castile soap. Our readers will remember that Dr. Peaslee had shown by the practice adopted in two of his cases of ovariectomy, that the peritoneal cavity is equally tolerant of washing out, and even that such injections are required to prevent the manifestation of septicæmic symptoms, from the absorption into the blood of the secreted fluids.

ART. 30.—*Cases of Obstruction of the Bowels, with Remarks.* By D. G. HAMILTON. [Edinburgh Medical Journal, October, 1867.]

Three cases, illustrating treatment by insufflation of the bowel; one only proved successful. Compare Mr. Playfair's cases of invagination treated by this method, and reported in this journal for October last.

ART. 31.—*Cases of Ascites.* By C. D. HOMANS, M.D., [Boston Medical and Surgical Journal, October 24, 1867,] and by Dr. DE FARIA. [Gazeta Medica de Bahia, June 10, 1867.]

Four cases are reported by Dr. Homans, in two of which fatal peritonitis supervened on the operation of tapping. The tapping in one instance was the

first time this operation had been performed. Prof. de Faria reports a single case where the ascites was dependent on hepatic disease, and in which he twice performed paracentesis abdominis at an interval of only seven days. The second operation was followed within twenty-four hours by unequivocal signs of peritonitis, from which the patient happily recovered.

Another case, illustrative of this same point, has recently occurred in the Boston City Hospital, in the service of Dr. Buckingham, and reported in the Boston Medical and Surgical Journal, February 20, 1868. It was a case of ovarian cyst, treated by tapping low down with the view of forming a permanent fistula. Acute peritonitis followed the operation.

The simple operation of tapping the abdominal cavity, especially the first time, is by no means the harmless procedure generally supposed. Dr. Peaslee, in his paper on "Ovarian Tumors," read before the Academy of Medicine, March 17, 1864, (see Bulletin for that year,) has collected some interesting statistics on the question of first tapping in cases of ovarian cysts, showing that the fatality ranges from fourteen to twenty-five per cent. of all operated upon. In simple ascites unconnected with cysts, there is not so great a liability to this unpleasant complication; but still it does occur sufficiently often, as these cases reported by Dr. Homans and Faria show, to suggest the propriety of every care and precaution in the operation.

ART. 32.—*Acute Inflammation of the Psoas Magnus Muscle.* By J. W. GROSVENOR, M.D. [Medical Record, December 2, 1867.]

Dr. Grosvenor finds only a single case reported in detail of this rare affection. This was by Dr. C. W. Parsons, of Providence, R. I. [Boston Medical and Surgical Journal, September 10, 1851.] Professor Gross in his Surgery mentions another case. Professor

Parker of this city has notes of two unpublished cases that occurred in his practice.

The subject was a student, 19 years of age, who while playing ball, on June 27, 1867, felt something "give way" in his right side.

Soon after returning home on the same day, he was taken sick with vomiting and quite a sharp pain in the right lumbar region. Tongue was slightly furred, bowels constipated, pulse full and about ninety per minute.

A cathartic of magnesia in combination with charcoal acted promptly, by which the pain was considerably relieved and the vomiting entirely. On the morning of June 29th, patient had quite a severe chill. For the four or five days following there was but little change in the symptoms—pulse fair, and about eighty per minute, tongue slightly brown and moist, stomach uncomfortable, tendency to diarrhœa, the pain in the right lumbar region continuing, though not severe. July 4th, a swelling and hardness were observed over the seat of the pain. It was circumscribed, and covered a space of about four square inches, its centre being on a vertical level with the anterior superior spinous process of the ilium. For two or three days it became a little more prominent, and then remained *in statu quo*.

Patient found urination difficult without standing. He could not fully extend his right leg, kept the right thigh flexed on the abdomen, and rotated outwards, moved from side to side in bed with difficulty and pain; when on his feet assumed a stooping posture, with the body inclined toward the right side. Abdomen not swollen, and not tender on pressure, except in right lumbar and right iliac regions. From about the 4th to the 12th, patient was comfortably sick, was able to get up without assistance every day, his pulse fair, the general symptoms being the same as during the few days previous to the appearance of the swelling. At 3 a. m. of the 12th, he was seized with a severe pain and excessive vomiting of a greenish-looking material; cold, clammy

perspiration followed, pulse became very rapid and feeble. Vomiting continued with slight abatement till death at 6½ o'clock p. m. of the same day.

Treatment previous to the sinking stage, on July 12th, consisted of a cathartic at the outset of the disease, as already mentioned, injections of starch and laudanum to control the diarrhœa, anodynes sufficient to relieve pain and procure rest and sleep at night, animal broths and some fruits, occasionally brandy and water. The tumor was painted with tincture iodine for several days, and leeches applied to it on the 11th. In the stage of collapse treatment consisted in morphia injected hypodermically, and iced champagne; to which were added a few drops of chloroform. During his sickness the patient, who was under the medical care of his father Dr. Perry, was seen by Drs. Peckham and Parsons, of the city, and Dr. Clapp, of Pawtucket.

Autopsy, by Dr. Mason, seventy-two hours after death.—Greater omentum slightly adherent to small intestines, which were considerably congested. Lower part of ascending colon and appendix vermiformis adherent to abdominal wall. A few fibres of psoas magnus muscle were rough and broken down, and the muscle itself dissected up along its posterior surface, and the peritoneum separated from its anterior surface. The anterior crural nerve running along the outer border of the muscle was separated from all attachments for a distance of six inches. About three pints of purulent fluid in peritoneal cavity. The rupture of the peritoneum was apparently between the stomach and liver. Right kidney healthy. No diseased bone discovered.

Undoubtedly inflammation commenced at that part of the psoas magnus muscle where the fibres were broken down, an abscess followed, and pus as it was formed burrowed under the muscle, dissected up the peritoneum, and finally burst into the peritoneal cavity on the morning of July 12th, at the time when the alarming change in the symptoms occurred.

Dr. G. appends to his account of the case a careful resumé of the causes, symptoms, diagnosis, etc., of this rare affection.

ART. 33.—*Treatment of Cerebral Congestion and Hallucination by Arsenious Acid.* By M. le Dr. LISLE. [*Archives Générales de Médecine*, October, 1867, and *Medical Times and Gazette*.]

M. Lisle thus terminates a paper he read to the Academy of Medicine upon the "Treatment of Cerebral Congestion and Hallucinations by Arsenious Acid." 1. The insane frequently present more or less distinct signs of cerebral congestion, and the subjects of hallucination always do so. In 193 cases of the latter description treated by arsenious acid, 131, or 67 per cent., were cured, and 29 experienced marked and durable amelioration. 2. Hallucination, considered heretofore as a symptom of insanity, is really only a complication, almost always of serious import. It is the most characteristic symptoms of cerebral congestion, the essential nature of which is little known, and which may terminate in insanity, although this is not a necessary consequence. 3. Arsenious acid is truly a specific remedy in this affection. It is also of great utility in paralysis, incoherency, and melancholy unattended with hallucinations, but presenting symptoms of cerebral congestion. 4. Administered with prudence and carefully watched, it is one of the most inoffensive agents of the *Materia Medica*. The dose should vary from five to fifteen millegrammes, administered three times a day, just before each meal.

M. de Ranse, commenting on this paper in the *Gazette Médicale*, observes that, while every one admits that cerebral congestion is often the cause of hallucinations, few will agree with M. Lisle as to the constancy of the relation, for in some hallucinations succeeding to delibitating causes, as hæmorrhage, spermatorrhœa, fasting, etc., a totally opposite condition prevails.

They also occur in hysteria, and especially in chorea. Notwithstanding, too, the weight of M. Lisle's opinion, as director of the Marseilles Lunatic Asylum, it must be admitted that hallucinations constitute one of the most frequent symptoms of all forms of insanity, and especially in monomania, quite unattended with symptoms of congestion. It is not meant, however, to be asserted that hallucinations never constitute an idiopathic condition independently of mental alienation. As to the arsenious acid, M. Lamare-Picquot long since recommended it in doses of five to ten drops of Fowler's solution, continued over a long period, as a hyposthenic in threatened apoplexy.

ART. 34.—*On Hæmorrhage from Waxy or Amyloid Degeneration.* By T. GRAINGER STEWART, M.D., F.R.S.E., etc. [British and Foreign Medico-Chir. Review, January, 1868.]

Dr. Stewart thinks that the following conclusions are warranted by the facts thus far observed in connection with the subject :

1. That hæmorrhage is not a very infrequent consequence of the waxy or amyloid degeneration of vessels.
2. That, next to the spleen, the intestinal tract is the most common seat of such hæmorrhage.
3. That the hæmorrhage occurs independently of any visible ulcerative process.
4. That it probably depends upon rupture of the capillaries of the affected parts.
5. That waxy or amyloid degeneration of the liver does not of itself suffice to produce hæmorrhage from the bowels.
6. That the hæmorrhage occurs in cases in which the liver is free from waxy degeneration.
7. That the occurrence of hæmorrhage increases the danger of the patient. But
8. That sometimes it comes and goes for years without markedly depressing the vital powers.

ART. 35.—*On the Treatment of Obstinate Constipation by Faradization of the Bowel.* By JULIUS ALTHAUS, M.D. [Lancet, November 16, 1867.]

Dr. Althaus believes that faradization will be found efficacious in many cases where other medication has failed, and relates three cases sustaining this position.

The Treatment of Intestinal Obstruction by Electricity. By Dr. KEYHEL, of Ghent. [From the "Annales de la Société de Médecine de Gand," in the Bulletin Général de Thérapeutique, August, 1867.]

ART. 36.—*The Alkaline Treatment of Pneumonia.* By JOHN POPHAM, M.B., etc. [British Medical Journal, December 28, 1867.]

Dr. Popham, in treating pneumonia in accordance with Bennett's restorative plan, found a number of cases of so grave a character that he did not consider himself justifiable in relying or trusting to restoratives alone; and in casting about for some plan of medical treatment which might prove of service and yet not weaken the powers of the system, he was led to try the alkalies. He has not however adopted them to the exclusion of all other plans of treatment, but combines them with the early use of restoratives, and also with the application of blisters externally. Under this three-fold plan he has found the disease very generally readily yielding. Of thirty hospital cases, two were admitted in a dying condition, (living respectively seventeen and thirty-six hours,) and cannot therefore be taken into account in the statistics, nor indeed did these two cases receive any treatment except cordials. The remaining twenty-eight, treated on the above plan, all recovered. The alkaline salt preferred by Dr. Popham is the bicarbonate of potash, in doses from five grains (or less in very young children) to half a drachm in adults, given largely diluted in mucilaginous liquids. This treatment was commenced as soon as the disease declared itself, or rather as soon as the cases came under obser-

vation, and the amount of the alkaline salt increased until the disease reached its acme, and was then gradually withdrawn. The most striking effects of the medication are the alterations of the sputa. In two or three days this became resolved; the fine bubbles were coarse and inflated; the rubiginous color was changed to white; the tenacity of adhesion to the air-cells was greatly lessened, so that the sputa were easily brought up. The pasty covering on the tongue seems to dissolve away in the excess of saliva induced by the medicine; the urine becomes of course alkaline, and this alkalinity is a test of the medicine, affording at once a means of regulating the amount, and also showing the good effects of the medication, which do not become apparent until the alkalinity of the urine is observed.

Medical Jurisprudence and Toxicology.

By R. L. PARSONS, Physician to New York City Lunatic Asylum.

ART. I.—*The Case of Henry Gabites.* A medico-legal study. [Journal of Mental Science.]

IN the July number of the Journal of Mental Science is an article on the case of Henry Gabites, by John Kitching, M.D., Superintendent of the Friend's Retreat at York. The case is of no little interest as it involves the question of diminished responsibility on account of mental weakness. The question regarding the influence that should be attributed to epilepsy existing at some previous time, as a cause of such mental weakness, or of rendering probable a more profound impairment or disturbance of mind, is also involved. A number of cases have been adjudicated within the past few years in regard to which one or both of these questions have arisen, and similar cases must be of frequent occurrence.

At the winter jail delivery for the West Riding of

York, held at Leeds in December, 1866, Henry Gabites was indicted for the murder of Arthur Allen.

Gabites was sixteen and a half years old, Allen was a year and a half younger. They were apprenticed to a draper, occupied the same room, and had always been on friendly terms. On the week preceding the murder, however, the boys had been forbidden to leave the house after business hours on account of what would seem to have been Allen's fault. The prohibition was made on Saturday. On Monday night Gabites was observed to be dull and heavy, and complained of headache. His companion and himself went to bed on their usual friendly terms. The following morning Gabites went, at about half past seven o'clock, to his master's bedroom, and knocking at the door, said, "I have killed Arthur!" His master asked him what he meant. He said again, "I have killed Arthur." In reply to a further question he added, "I have murdered him with a hammer and killed him with a knife." On being asked what he had done it for, he replied, "for revenge." Mr. Draper, the master, rushed to the bedroom and found the narrative too literally substantiated by what he saw. Allen was lying in bed on his back in a pool of blood. The surgeon found several scalp wounds and fractures of the skull, and a superficial incised wound on the neck. Death soon ensued.

The personal history of Gabites is in brief as follows: He was born in March, 1850. When a year old he was attacked with fits, for which leeches were ordered to be applied by the surgeon. The fits continued to recur for about two years, during which time the mother kept leeches in the house and applied them in accordance with her own judgment, founded on the surgeon's orders. When the fits ceased deafness supervened, and continued for several years with varying intensity. As the child grew up his mind was found to be defective. He lacked in intellectual capacity and in the sprightliness common to boys of his age. "Those who knew the family noticed that Henry was a dull, feeble-minded

boy, as having a vacant, soft, simple look." He would seem to have been gentle and inoffensive in his manners, was amiable in disposition, and had never shown any signs of vindictiveness.

His mother, who always treated him kindly, died when he was six years of age. His father soon married a second wife, who treated the boy with great cruelty and neglect. She kept him employed in the most laborious and disagreeable drudgery, did not allow him sufficient food, beat him often and severely, and assured him he would some day come to the gallows. During all this time no change was noticed in his disposition. He was still amiable, kind, and compliant. He left the house of his step-mother a few months previous to the homicide.

The following, among other points, were noted by Mr. Kitching on a personal examination of the prisoner. In appearance Gabites was childish; in expression amiable though simple. His intellectual capacities were evidently below mediocrity, his affections appeared to be exceptionally inert or wanting. His perceptions of right and wrong, though not absent, were vague. He said he had often been told he would come to the gallows, and he had long believed he should. He had an abiding impression that he must kill himself or some one else. The idea of killing Allen first arose when he was punished for Allen's fault; had entertained the idea of killing another fellow apprentice, but gave it up as the boy was much stronger than himself. He related the details of the killing with an apparent insensibility to the true nature of the act.

Before the defence was entered upon, the Judge quoted the following passage from the report of the judges to the House of Lords: "That to establish a defence on the ground of insanity, it must be clearly proved that at the time of the committal of the act charged, the accused was laboring under such a defect of reasoning, from disease of mind, as not to know the nature and quality of the act he was doing, and that

if he did know it he did not know that he was doing what was wrong. 'This of course referred to general insanity.'

Under this ruling acquittal on the ground of insanity was not anticipated, but it was hoped that he would be recommended to mercy on the ground of weakness and unsoundness of mind. Instead, he was declared guilty, "with a strong recommendation to mercy on the ground of extreme youth."

Mr. Kitching here recapitulates the reasons why *unsoundness of mind* might better have been substituted for *extreme youth*, namely: the epilepsy, the repeated bleedings, his subsequent deafness, the hardships endured, the reiterated suggestion of a certain doom, his lack of intelligence, the low development of his affective powers, and the peculiar circumstances that immediately preceded the homicide. The motive assigned by Gabites for the act was considered inadequate, as there was nothing to revenge save the punishment received, for which Allen was in no wise to blame. Indeed Gabites at other times declared that he had no spite against Allen, and that he said the Lord's Prayer while he was killing him. He had no sorrow or emotion on account of the act until some time after, when he had been under the instruction of the clergy.

All the phenomena elicited by the examination of Gabites, and the history of his life, lead in the writer's mind to the same conclusion that, in this youth, we have an instance of unsoundness of mind not coming within any legal definition as the law now stands, but established in nature, and therefore claiming a place among the great facts for which some provision should be made, when law and nature are thus brought face to face with each other.

ART. 2.—*Imbecility and Homicide*: Case of Gregor M'Gregor. [Journal of Insanity, April, 1867.]

Gregor M'Gregor, indicted for the murder of his

brother, Hugh M'Gregor, on the 20th of June, 1866, was brought up for trial in the Court of Oyer and Terminer at Genesee, Livingston County, N. Y., on the 6th of February following: The fact of the homicide being done as charged was admitted, and insanity made the sole defence.

In this case also the question of modified responsibility on account of mental weakness is involved.

Among other prefatory remarks made by the author are, substantially, the following :

There is a wide-spread conviction that the theories of insanity, both medical and legal, are of such a character as not well to further the ends of justice. The teachings of law and medicine regarding it are widely diverse, while the former especially are far from being sound.

But what is insanity? In answer to this question we cannot pretend to the accuracy attained in the purely physical sciences. The term insanity is applied to symptoms of which we do not know the cause. When the cause becomes known, the term insanity is dropped, and that of the disease, as *paralysie generale*, substituted.

The law gives two rules by which to judge when a person is not responsible for his acts: 1st, when the doer could not distinguish between right and wrong in regard to the acts done; and 2nd, when the acts were performed under the influence of an insane delusion. Many insane persons are punished under an application of these arbitrary rules. As no man is perfectly free from physical taint, so no one is mentally perfectly sound and free. The freedom of acts and volitions may be impaired by disease in various degrees, and hence the person should in justice be held to a modified responsibility.

The father of Gregor M'Gregor was stubborn, bigoted, and irascible; his mother was weak-minded and inefficient, and finally became demented. One of his brothers committed suicide by hanging. Hugh, the

murdered man, had attempted suicide. Gregor was shy and taciturn, had a weak memory, and was always treated as a child or a minor. When directed he did some of the lighter work about the farm, but he was eccentric in whatever he did. For instance, when binding grain, he would walk slowly from one bundle to another, but would suddenly seize the bundle and bind it with great dexterity. He was timid, but easily provoked to fury. When reproved, or otherwise displeased, he had repeatedly been known to threaten the life of the person displeasing him, by words and by acts.

About a year previous to the homicide there had been a brief wordy quarrel between Gregor and the deceased. Occasionally during the winter Hugh would come home and sleep on the floor in the room used in common, when he would, during the night, burn the wood Gregor had sawed for the morning. Of this Gregor complained bitterly.

On the evening before the murder Hugh again returned home. There was no quarrel between the brothers, but at about one o'clock Gregor arose, procured an axe, and killed his brother. He fled to the woods, but returned the next evening, and was arrested. When questioned he stated that he had intended "to give Hugh some" ever since the quarrel of the year before. He also said, "I suppose I'll be hung," and "I suppose I'll go where the bad folks go."

On examination before the trial it was found that defendant was of a strumous diathesis, and had a small, but not idiotic head. The posterior portion of the head, however, was undeveloped, as though the cerebellum and the posterior lobes of the cerebrum were wanting. His mental processes were slow and feeble, and seemed to be made up of simple judgments rather than of reasonings. He had a knowledge of right and wrong, and no insane delusions or morbid feelings were manifested. His affections were undeveloped; indeed his mental and moral powers seemed equally defective.

All the acquaintances of the prisoner testified that he

was "odd," "not like other people," and that they never considered or treated him as a common person.

The plea of insanity was at first set up in the defence, but was subsequently changed to that of "Guilty of murder in the second degree." The prisoner was formally sentenced to confinement for life in the State Prison at Auburn, but was actually sent to the asylum for insane convicts connected with the prison.

There could be no doubt that the prisoner knew right from wrong in reference to the act which he committed. Everything went to show that he recognized it as wrong, illegal, and likely to be punished. So do most children of six years old at the present day, and many of the inmates of an idiot and insane asylum. But he had not that degree of mental activity and energy which enlightened common sense should deem necessary to a criminal intent. It is clear that the dread of punishment was too vaguely and transiently felt to deserve the name of a motive in his case.

ART. 3.—*Remarks on the trial of Calvin M. Northrup, indicted for the Crime of administering Belladonna to his Wife with intent to Kill.* By CHARLES A. LEE, M.D. [Quarterly Journal of Psychological Medicine and Medical Jurisprudence, Jan. 1868.]

Calvin M. Northrup, a respectable attorney of Morrisania, New York, was indicted in 1863 by the Grand Jury of Westchester County, for the crime of administering poison to his wife, Eliza W. Northrup, with intent to kill. The indictment charged the accused with having made at least four separate attempts to murder his wife by giving her tincture of belladonna in various vehicles, such as "Plantation Bitters," coffee, and tea. After two elaborate trials in which the Jury could not agree, (ten to two, on each occasion, being satisfied of his guilt,) a third trial took place at White Plains, in February of the past year, before the Court

of Oyer and Terminer, Judge Lott presiding, in which the accused was found "guilty."

The only testimony taken in relation to the facts of the alleged poisoning was that of his wife and that of Dr. Horton, her medical attendant. The attempts were alleged to have been made immediately after her confinement; the first six days, the second two or three weeks, the third about four weeks, and the fourth about six weeks thereafter.

Mrs. Northrup testified that after she had taken Plantation Bitters, tea, or coffee, given to her by her husband at these various times, she became suddenly sick with the following symptoms, in the order as stated in the testimony. First attempt: Face puffed and bloated; an appearance of bright light before the eyes when closed; throat dry; sickness throughout the day. Second attempt: Drowsiness; went to sleep; dizziness and dry throat; a mist before the eyes; gait unsteady; articulation impaired. Third attempt: Dry throat: dizziness; double vision; weakness and trembling; a bright dazzling appearance; suppression of urine.

Dr. Horton's testimony was that on the first occasion he found her feverish and thirsty but not delirious: that on the second she was feverish, with dry skin, flushed face, and dry tongue and throat; that the expression of the eyes was staring; and that on the third she staggered as though she kept her balance with difficulty and was unable to move her tongue freely. Dr. Horton gave some coffee he had received from Mrs. Northrup to a small dog, and found that it occasioned muscular weakness and dilated pupils.

Mrs. Northrup testified that she found a drachm vial, more than half full of a liquid, in a trunk belonging to her husband. Dr. Horton found that this liquid became muddy *when a small quantity of water was poured into it*. From this fact and from the taste and smell he concluded that the liquid was belladonna.

The above comprises all the testimony that had any

essential bearing on the question of poisoning. No mention was made of either delirium or dilated pupils.

It appears then that nearly the whole evidence of poisoning rests on the testimony of the wife of the accused ; that the evidence of poisoning by belladonna, or of poisoning at all in fact, was very incomplete ; and further, if poisoned, it is by no means evident that she was poisoned by her husband.

ART. 4.—*The Sanity of Louis Bordier.* [Journal of Mental Science, January, 1868.]

THE facts in the case of Louis Bordier were in brief as follows :

At about four o'clock on the morning of September 3rd he murdered his paramour by cutting her throat with a sharp knife. He was tried for the murder, condemned, and executed.

It appears in evidence that Bordier had lived with Mary Snow, his paramour, some thirteen years at the time of the deed, and that three children were the issue of their alliance ; that Bordier had suffered from *fistula in ano* a considerable period of time, for which he had been treated in hospital, and that while in hospital his paramour had determined to forsake a man who was no longer competent for her support for another man. Of this determination Bordier was aware, and the subject had been a cause of altercation and ill feeling after his return from the hospital. The date of the separation had been fixed, and the prisoner stated that for about two weeks he had entertained the design of killing his concubine, his children, and himself.

Immediately after the commission of the murder Dr. Simpson was called in. He saw the prisoner about thirty-five minutes at that time, and, as the result of his examination, judged that the prisoner was insane, and so testified. Prisoner showed him a letter addressed to the prisoner's brother, which he had written on the day previous, stating the intention to kill the

whole family, including himself. In this letter, as well as during the examination, Bordier stated that it was necessary for him to die; that he could not part with his wife, nor could he leave his children to bear the stigma of having a father who had been a murderer. Witness stated that prisoner's conduct impressed him as being that of an insane man; that he explained to him all the circumstances of the murder in a detailed manner, showing by action what could not be otherwise well expressed; that he sat down and coolly smoked his pipe; and that he had the unconcerned look and manner of a person who had done no wrong, but rather an act that should be appreciated, although he evidently knew that the act was *legally* wrong and that he was amenable to punishment for the act. The necessity to commit the act he looked upon as a positive delusion, and his acts as those of a person whose moral faculties were impaired. Witness stated that he had at one time intended to make the study of insanity a specialty, and that he had had four or five hundred insane persons under his observation.

The two physicians who regularly visited Bordier while in prison discovered no evidence of insanity, and no testimony besides was offered on the question.

It appears then that the only evidence of insanity was the testimony of the one witness, Dr. Simpson, and that his knowledge of the prisoner was limited to thirty-five minutes of time. There was no evidence offered to show that the prisoner was insane either before or after the commission of the act.

Under the circumstances the verdict of the jury can hardly occasion surprise, and the more especially as the questions the witness had put to the prisoner during his short examination were leading in their character, and were put to a foreigner not fully conversant with the English language, and necessarily at the time laboring under some perturbation of mind. The very fact of this loose manner of conducting the examination was also suggestive of the idea that witness

had judged the prisoner insane before making the examination, and hence was particularly liable to misinterpret the significance of acts and general appearance as bearing on the question of insanity.

The following is a more probable theory than the one offered by the defence, namely, that the prisoner while sick in hospital had, on hearing of the intended departure of his paramour with another man, become jealous and depressed at the prospect of being left with three helpless children on his hands; that on his return some quarrels had ensued, and that, as the period of separation approached, he had become more averse to the separation, and had finally determined on the deed in accordance with a philosophy that Frenchmen not infrequently adopt. There is nothing in the letter or in the statements made to Dr. Simpson to contradict this theory. When he said it was necessary for him to commit the act, or to die, there is no reason to believe that he meant anything more than a necessity in relation to his own future happiness, or that of a part, or the whole, of his family, as distinguished from an absolute and unavoidable necessity.

ART. 5.—*Feigned Insanity.* Case of Derozier. [Translated from the work of Dr. Laurent on Feigned Insanity, for the American Journal of Insanity.]

Derozier, a pedler, forty-six years of age, had been charged with many robberies. The physician of the prison in which he was confined certified that he was of unsound mind, and Dr. Morel was appointed to examine into the mental condition of the accused.

It was found that Derozier appeared to be suspicious especially of poisoning; that he seemed to be terrified at the sight of a cat; *that his daily life was that of the automatic and extravagant insane, and that his ideas were exaggerated.* His physical condition was found to be normal.

On being questioned, his answers were entirely irrelevant. For instance, to the question "Have you any family?" he replied, "I have provided them with a great many remnants, silk stockings, I have a factory, thirty-five millions." When asked his age, he would reply, "thirty-five centimes," etc.

Dr. Morel judged that Derozier's insanity was simulated for the following reasons, namely: that he confounded what it is impossible for the insane to confound by the most extravagant logic, for they are never without ideas of cause, of substance, and of being; that his pretended delusions of wealth were not connected with the usual ideas of ambition; that the physical symptoms of general paralysis were wanting; that symptoms of acute mania or of dementia were not present; and that his general bearing and actions were like those that might be assumed by a person simulating insanity, who had never seen much of the insane. On a second trial a verdict of guilty without extenuating circumstances was rendered, and the prisoner condemned to twenty years of hard labor.

Immediately after conviction Derozier acknowledged the part he had attempted to play, apologized to his keepers for the trouble he had made them, discontinued his insane acts and the expression of incoherent and extravagant ideas, and in fact showed himself to be an intelligent and sound-minded person.

ART. 6.—*Case of George W. Winnemore.* By Dr. F. Ray. [American Journal of Insanity, October, 1867.]

On the 29th of April last George W. Winnemore was indicted by the grand jury in Philadelphia, Pa., for the murder of Dorcas M'Gillan on the 25th of April, four days before; and the 3d of May following was arraigned for his trial before the Court of Oyer and Terminer, Brewer and Pierce Associate Justices.

It appeared in evidence that the husband of the deceased came home one day after an hour's absence and was let in by the prisoner, who said he had just come in and found Mrs M. with her throat cut and quite dead. The prisoner went for a policeman, and was himself arrested while leaving the premises shortly after. The evidence against him was circumstantial of course, and consisted of but few facts. A razor indentified as his was found in the privy; two bank bills of two dollars each were in the possession of the deceased the day before and two bills of two dollars each were found in the prisoner's pocket; and his own statement, that he entered the house a few minutes only previously to the husband, was disproved by two witnesses, neighbors, who had been looking in that direction, steadily, for half an hour before they saw Mr. M. go to the door. To meet this evidence the prisoner's counsel contended that it was impossible to identify so common a thing as a razor; that he was not pressed for money; that he had never been guilty of any criminal act, and was regarded by all who knew him (and the evidence on this point was quite satisfactory) as a quiet, inoffensive, well disposed young man.

Testimony was offered in the defence to the effect that the prisoner had suffered from epilepsy from the age of two or three years to the age of ten or eleven; that the fits had sometimes amounted to thirty or forty a day; that when seven years of age he had received a severe injury on the head, that of late years he had professed to see the dead as plainly as he saw the living; that he had at times imagined himself to be an Indian chief, and would talk the Indian language, and that these manifestations were paroxysmal; that he professed to know what was going on a mile away; that during the last few months he had acted very foolishly; that he talked incoherently; that he would dance around the room like an Indian; that he would make peculiar grimaces; that he had been in an unconscious state half an hour at a time; that he had made

two attempts to commit suicide, and that one of his uncles had actually committed suicide.

The defence of insanity was set up on the evidence just adduced. Some physicians were examined in relation to this theory, but it would seem that they were not conversant with all the facts in the case, had not heard all the evidence, had not had sufficient opportunity to examine the prisoner, and that obstacles were persistently thrown in the way of evidence tending to substantiate the theory of insanity.

The prisoner was convicted, and was executed August 29th.

The counsel, feeling that the trial had not been a fair one, endeavored to obtain a new trial, but failed. They then requested the Governor to appoint a medical commission for the purpose of investigating the prisoner's mental condition, and in this too they failed. As a last resort a few days before the execution they requested some medical men, who were familiar with epilepsy and insanity, to have a personal interview with the prisoner. These gentlemen found such indications of insanity that they addressed a petition to the Governor asking a stay of the execution until a thorough, deliberate, and scientific inquiry could be made regarding the mental condition of the prisoner. As already stated, this petition was not granted.

Before dismissing the subject a sense of duty obliges us to animadvert in the strongest terms of reprobation on some of the incidental features of this trial, although one would gladly avoid the shame and mortification which it involves. The laws of the land and the great unwritten law of humanity provide for every one charged with crime a fair trial of his case; a trial in which every reasonable opportunity will be afforded for making good his defence. The simple mention of a few dates and circumstances, without argument or comment, will show sufficiently how this sacred right was respected in this instance. Within eight days after the homicide was committed Winnemore was

arraigned for trial. Counsel were assigned him who had never seen him before and knew no more than any body else about the facts of the case. The junior counsel was just admitted to the bar, and the senior counsel was then, and continued to be for several days, engaged elsewhere. They begged for a postponement of the trial in order that they might make the necessary preparations. This request was resisted by the District Attorney for no other reason than that *he* was ready for trial, and that great crimes should be punished speedily. A delay of two days was granted, when the prisoner's counsel again begged for more time, but without success. This brief statement of facts is enough to show that the prisoner had not a fair trial. The counsel were dependent on chance for their witnesses; they went to trial without having decided on the defence to be adopted; they had no opportunity to confer with experts, and experts, if employed, would have had no opportunity to examine the mental or bodily condition of the prisoner; strange rules of evidence were sprung upon them, excluding much of the medical testimony they offered; and evidence of the highest importance came too late though the utmost dispatch was used to obtain it. True, the government offered every facility for obtaining evidence, except the only one that could be of any avail, and were willing to admit certain facts which witnesses not forthcoming were expected to prove. A single incident will show how this swift dispatch affected the prisoner's interests. It was one of the points made by the government that although Winnemore might have been epileptic in his childhood it did not appear that he had been afflicted with this disease during the later years of his life. Of course it did not, because even the speed of the United States mail was insufficient to transmit in season the requisite evidence then on its way: the certificate of the surgeon of his regiment that he was an epileptic, and was discharged from the service for that reason!

In view of what we already know of epilepsy, and

of what still remains to be learned, we have a right to require the utmost circumspection and closest investigation whenever the legal liabilities of epileptics are in question. The fact of its existence being established, is it going too far to say that legal responsibility is presumptively annulled, and that the burden of proof lies on the party that alleges the contrary? People are scarcely ready for it yet, perhaps, but to that complexion will they come at last.

ART. 7.—*Homicidal Lypemania*. [Allgemeine Zeitschrift für Psychiatrie L'imparziale, 1867.]

A peasant woman, thirty years of age, with a well-formed head, of medium stature, fine regular features, and mild physiognomy, was, on the 19th of July, in her house alone with her two little sons, on whom she inflicted two wounds upon the neck with a razor, and then gave herself two wounds. Having been arrested and brought before the Justice, the defence of insanity was raised. Her mental alienation became evident on an examination by Dr. Raphael Billi and Carl Levi, alienist physicians at Siena. Their opinion was founded on the following points, namely: that (1) her grandfather and her father had committed suicide, also that one of her brothers was subject to attacks of recurrent mania; (2) on certain symptoms, she having been for some time more taciturn than usual and appearing to be apprehensive of future unhappiness, as a cord with which to hang herself was found in a room in her house; (3) on rational [juridischen] grounds, for no mother of a good and kindly disposition who tenderly loved her sons would imbrue her hands in their blood and then remain cold and silent in view of a spectacle so well calculated to awaken emotion [mitleid]. In consequence of this opinion, the woman was taken for safety to the Asylum at Siena as a lypemaniac. At the end of four months she appeared to be entirely

cured, and confessed the motive that led to the attempt ; that for some time she had been subject to an unspeakable melancholy, to such a fear of a mysterious evil, that she felt an overpowering necessity to die ; but she was unwilling that her sons should survive her, as they also were threatened with a thousand misfortunes. One day, overcome by this morbid impulse, she had resolved to kill them and also herself. For a moment she had felt remorse at the sight of the blood, but again had fallen into her wild melancholy. The intention to discharge her from the institution was not carried out, as her family could not give security for the safe keeping which such cases only too much need.

ART. 8.—*Medico-Legal Notes in the case of a man who made his will just before committing suicide.* By Dr. LEGRAND DU SAULLE. [Annales Medico-Psychologique, March, 1867.]

The subject of these remarks, A. T. Daire, made an ineffectual attempt at suicide April 22, 1863, and a few hours afterward was induced by interested parties to make a will in their favor, and to disinherit his own family. Four days later he succeeded in accomplishing self-destruction. Dr. Legrand du Saulle was called upon to give his opinion as to whether the deceased was in his sound mind at the time he made his will. The question is considered under the following heads :

1. Has Daire throughout his life enjoyed a sound condition of mind?

2. With what lesion of the understanding was Daire affected at the latter part of his life?

3. Was Daire in the full enjoyment of his own free will from the 22d to the 26th of April, 1863; that is to say, during the time between his fruitless suicidal attempt and his accomplishment of self-destruction?

1. Daire was born with most unfortunate hereditary tendencies to mental disease. His father was eccentric,

and his mother, who probably suffered from chronic melancholia, refused to go out of her dwelling, where she lived for forty years in a disgustingly untidy condition. His sister died at the Asylum of Saint You. Daire was given to intemperance and was frequently intoxicated.

There is but a short step from chronic alcoholism to insanity, even where there is no hereditary predisposition, as there certainly was in the present case. It is not surprising then that Daire had always been considered strange, that he had been heard talking out loud to himself in the streets; that his eccentricities were such as to render it difficult for his neighbors to know when he was and when he was not intoxicated, and that there was nothing wanting but an exciting cause in order to develop violent symptoms of insanity.

2. Daire, after the death of his mother, January 20, 1863, broke out into extravagant demonstrations of grief, crying, striking his head, exclaiming that he was lost, and at the same time threatening to kill his servant. On the 12th of April he told one of his tenants that he was a ruined man, and that he had not money enough to pay his baker or his tailor. At this very time he had fifty-two thousand francs of his own in his house. A few days later he declared that he was lost, that he was crazy, and that he would destroy himself.

These, and other circumstances of a similar nature, not only indicate insanity, but also point to the form of the mental disorder. It was not mania-a-potu, nor was it alcoholic dementia. There is no lack of connection in the ideas, no incoherence of words or actions; the process of reasoning is conducted in a logical manner, the absurdity of the conclusions arrived at being accounted for by the falsity of the premises. The restless anxiety, the fearful forebodings, the unhappy delusions of poverty, and the suicidal propensities, all show that Daire was attacked with melancholia caused by intemperance; or, as the author expresses it, "*melancolie alcoolique.*"

Daire had what is not infrequent in these cases, a consciousness of the serious changes within him, in fact a positive internal evidence that he was a doomed man and fated to destroy himself, as he declared to several who afterwards appeared as witnesses in the case.

3. There seems to have been no amelioration in Daire's condition, and no relief from his distressing delusions. His suicidal propensities became stronger and stronger, and under their irresistible influence he, on the 22d of April, hung himself. By prompt interference life was restored. A few hours later Daire was induced to make his will and to disinherit his family. The part which Daire bore in this transaction was probably not only that of an insane person, but also of one who was still suffering from severe nervous shock. It is likely that if he had been urged he would have yielded his automatic performance to almost any act, however absurd.

After the 22d of April he was more intensely melancholic than ever before. On the 26th of April he ended these torments by an effectual suicidal attempt.

The conclusions arrived at are as follows:

1. Daire throughout his life has presented evident signs of mental weakness.

2. At the latter part of his life he was attacked with a grave form of melancholia resulting from intemperance.

3. He was insane when he made his will on the 22d of April, 1863.

Daire's will was first pronounced null and void by the "Court of First Instance," of Havre, and afterward declared valid by the Imperial Court of Rouen.

ART. 9.—*Medico-Legal Report in the case of an Epileptic accused of Incendiarism and Homicide.* By Dr. ETOE-DEMAZY. [Annales Medico-Psychologiques, November, 1867.]

Francis C—, charged with setting fire to his own

dwelling, and with destroying his wife by preventing her escape from the burning house, was aged thirty-five years, medium height, and robust constitution, with no marked hereditary taint of insanity, although his mother died of paralysis, and one of his sisters was regarded as imbecile. He possessed ordinary intelligence, but never enjoyed even the most elementary education. He never went to school, nor received any instruction at home. Still he conducted his affairs properly, was honest, and was industrious in cultivating a small tract of land which he had inherited. He married a kind and faithful woman, to whom he was much attached. From his early childhood he had been subject to epilepsy, and after marriage his convulsions became more frequent and severe, recurring every few days instead of monthly, and being followed by a state of stupidity, amounting at times almost to complete dementia.

While recovering from this stupid state, in which there was incapacity for the performance of the simplest duties, and while regaining his normal condition, the accused seemed to pass through an intervening stage characterized by depression of feelings and melancholia.

On one occasion, in January, 1863, he went to his brother's house, and declared that he was bewitched; that he saw an animal before him which compelled him to walk in spite of himself. He retained this delusion and was somewhat incoherent for about three weeks before he regained his normal mental condition.

He had no children, and his friends sometimes said to him in a jocular manner, "Francis, since you can't get any children, we will assist you." This simple remark not only provoked a momentary display of bad feeling on the part of C—, but appeared to produce a permanent and depressing effect upon his mind. He became jealous and suspicious of his wife, and would not permit her to leave the house except in his company. One day during his absence from home, a pedler called at the house with some blankets for sale. This

occurrence, at the beginning of January, 1866, appears to have been the immediate exciting cause of a second attack of insanity, during which was committed the crime charged to the accused. On the 10th of January his brother found him in a state of violent agitation, searching in the remotest corners of the house for the pedler, whom he supposed to be concealed somewhere about the premises, and for the blankets, which he imagined his wife had purchased of the intruder. On the 11th of January he was visited by a physician, who recognized that he was insane, and advised his immediate confinement in an asylum.

On the night of the 12th of January, Francis C— was found walking in front of his burning house with a large stick in his hand, gesticulating wildly, and attacking violently all who attempted to approach. For a short time after his arrest his symptoms were those of acute mania, which was followed by a condition of great stupidity. He did not appear to have the slightest recollection of events which had occurred three days previous to his arrest. He had hallucinations of taste, of sight, and of hearing, and at the time this report was written he had experienced no lucid intervals.

After giving a detailed account of the circumstances, which have here been briefly referred to, the reporter sketches some of the prominent features of insanity originating in epilepsy, and indicates how exactly the symptoms of the accused tally with those of a typical case of this disease.

Epilepsy is a fruitful cause of mental disorder. It may give rise to various forms of insanity, each one of which is *sui generis*. The symptoms in the main may answer to mania, melancholy, or dementia, but they have a marked and distinctive character, and are not to be confounded with, nor are they as readily feigned, as those ordinarily observed and classed under the above forms of mental alienation. Although the personal experience of the accused might have rendered him familiar with the more striking characteristics of epileptic in-

sanity and with the sequence of its symptoms, still it would have been impossible for him to have feigned the disease, or to have practised any deception, in the presence of one who had enjoyed opportunities for clinical observation of this affection.

The sudden and violent attacks of mania, the blind and impulsive delirium, the destructive and homicidal propensities, the profound stupidity following the maniacal outbursts, the temporary but entire loss of memory, and the complete obliteration of all recollection of what had transpired during the attacks, these, and many other unmistakable symptoms, were so faithfully represented in the case of the accused, that the reporter had no reason to doubt the reality and severity of the mental disorder. The report is therefore terminated by the following conclusions :

1. Francis C—, accused of having, between the 12th and 13th of January, 1864, set fire to the house which he occupied with his wife Louisa B—, and of having caused the death of the latter, was at the time referred to, insane.

2. Francis C— is still insane, and there is reason to consider him as dangerous to himself and others.

3. He should be placed at the disposal of the civil authorities in order that he may be permanently committed to the asylum where he is only temporarily detained subject to the order of the court.

ART. 10.—*Report on the Mental Condition of R. Marin*, charged with the assassination of his wife. Dr. V. COMBES. [Annales Medico-Psychologique. September, 1867.]

On the 30th of May, 1866, R. Marin, a weaver at Mayenne, enters the chamber in which were his wife and infant daughter, goes to the cellar for a hatchet, reascends, and attacks his wife, inflicting three or four blows with his hatchet.

The wife was stunned, and died without regaining her consciousness.

His mother, a neighbor, and Dr. Combes arrived soon after. Marin confessed that he had killed his wife, and when told that he would be punished, said that he would then destroy himself. At this time, and when questioned by the judge, he seemed to be emotionless, stupid, and entirely absorbed; to have little consciousness of what he had done, and to be much depressed.

His previous history was as follows: at the age of twenty-two years (he was thirty at the time of the deed) he suffered an attack of acute mania; was placed in an asylum under the care of Dr. Arnozan in June, 1858, but was removed when still uncured on the 28th of August following. The entry on the records of the asylum, made at the time of this removal, was to the effect that Marin still labored under acute mania, notwithstanding his apparent calmness; that he still needed the greatest watchfulness, and would probably require to be again placed in the asylum. On the 21st September following he was recommitted in a state of acute mania, his malady having been aggravated since his departure. On the 12th of November he was discharged cured.

In September, 1862, a third (second?) attack was manifested. The form was that of acute mania like the other, and was marked by acts of violence toward other persons, especially his mother. In January, 1863, some amelioration took place. In February he was discharged as cured. Dr. Combes calls especial attention to the fact that when Marin was first removed from the asylum, Dr. Arnozan seemed to fear for the consequences that might ensue in case of a relapse.

Since his discharge in 1863 he attracted little attention, but was unsocial in his habits. He was addicted to onanism and to sexual excesses. At the instance of his mother he married one year before the date of the murder, but never had any liking for his wife. This

union was not happy, and quarrels ensued, owing to which, when far advanced in pregnancy, the wife went to live with her sister. She gave birth to a girl, at which event the husband, who had desired a boy, was much annoyed. Toward the middle of May, however, she returned to live with her husband. Soon after, at the instigation of friends who thought her husband of unsound mind, she attempted to get a separation and support for herself and child.

She did not succeed, and as a result of the attempt Marin showed great ill-feeling toward her; he was agitated; did not eat, worked little, and often complained of his head. This change of mental condition was noticed by his mother, who persuaded him to sleep in her apartments while she slept with her daughter-in-law. A neighbor had also remarked the condition of Marin, and had heard him say, "Something very sad will soon happen."

On examination immediately after the homicide, and while Marin was in prison, no especial impairment of physical health was noticed except that his skin was cold and his tongue large and moist. For some time he ate and slept little, and was depressed physically and mentally. He spoke in a low voice, was absorbed, said he heard noises in his ears; also said either that he had no motive for the act, or that he had killed her that he also might be killed, and that he ought to die. His memory seemed to be impaired.

These are the principal points in the history of the case.

The more important points against Marin would seem to be the acknowledged and persistent hatred he bore his wife, his threats, and his evident premeditation and preparation for the act. The greater part of the symptoms that were manifested after the commission of the deed might easily have been simulated, or have been merely consequences that would naturally follow; as his melancholy and depression, his various statements, his stupidity, and his apparent impairment of memory.

On reviewing the whole question, however, Dr. Combes came to the following conclusions, namely, that as on several previous occasions Marin had suffered undoubted attacks of acute mania, so on this occasion an attack of mania had immediately followed the attempt of his wife to get a separation and support, different persons, indeed, having made the observation that he was not in his right mind; but that after the commission of the deed, owing to apprehension, regret, some sort of appreciation of the nature and consequences of his act, etc., the accused became a lype-maniac.

In accordance with the opinion expressed by Dr. Combes, Marin was acquitted and confined in the Roche-Gaudon Asylum. Since he has been in that asylum there have been alternate accessions of stupidity and excitability. He is now considered improved but by no means cured.

ART. II.—*Medico-Legal Report in the case of a Woman accused of Incendiarism.* By Drs. HENRY BONNET and JULES DULARD. [*Annales Medico-Psychologiques*, January, 1867.]

During the night of July 31, 1865, fire broke out in the house of M. Bertand, in the Canton of Charmes (Vosges). The house was burned to the ground, and the loss was estimated at thirty thousand francs. Investigations failed to reveal the origin of the fire or to cast suspicion upon any one as its author. One year from the above date, on the night of July 31, 1866, in the same neighborhood, the house of one Legrand was entirely destroyed by fire. The accused, Victorine Crosier, was the wife of Legrand. One month before the crime she had induced her husband to rent a house and to abandon his own residence, to which she had an unaccountable antipathy, and in which she declared she never could live contentedly.

Legrand found his wife equally unhappy in their new abode, and was making preparations, the 30th of July, to remove to his own house again, when Victorine declared that she would burn the house before she would return to it. This threat and the wife's sudden absence from home on the night of the fire, July 31, led Legrand to charge her with the incendiarism. When brought before the authorities Victorine Crosier plead guilty to the charge of having burned her husband's house, and also volunteered the information that she had set fire to the house of Bertrand the year previous.

The general appearance of the accused on this occasion was such as to excite doubts as to her sanity. Medical experts were called upon to make an investigation which, together with the evidence adduced, resulted in establishing the following facts, with regard to the antecedents and mental condition of the accused.

Victorine Crosier was born of poor parents, and was reared in poverty, with very slight educational advantages. Her mental endowments were naturally of a low order. Although not an imbecile she was evidently not possessed of an ordinary amount of intelligence, as she was spoken of by the neighbors as "bornée," a popular term indicating an arrest both of mental and physical development. Her early surroundings were little calculated to instil into her youthful mind just ideas of right and wrong.

At an early age she was thrown upon her own resources, when she became a house-servant and seemed inclined to be honest and industrious. In the capacity of a domestic she gave temporary satisfaction in various families, but it was remarked that she was seldom retained long in any one situation, and that she was of an uneven temper and restless disposition. The exact circumstances attending the marriage of Victorine Crosier are not known. It is recognized, however, that in becoming the wife of Legrand she formed a most unfortunate union. Legrand was ignorant, superstitious,

and brutal. In fact, the domestic relations of the accused revealed the active and constant causes which were at work undermining the originally slight foundation on which her mental integrity rested. The rearing of a family in poverty had induced a state of anæmia and general debility, while frequent family quarrels had rendered her irritable and melancholic. There is another feature in the private life of the accused which is very prominent when regarded in a causative relation to her subsequent insanity. For two years previous to the events here recorded there had existed an improper intimacy between Victorine Crosier and a man by the name Duval. Duval, who was a sort of beggar or vagabond, was first allowed to remain for a time at the house of Legrand as a matter of charity. Subsequently, however, he became almost as one of the family, and strange to say, acquired such an influence over the minds of both husband and wife, that he tyrannized over the one and seduced the other. His presence was tolerated for two years, when he was driven away by the accused under the superstitious belief that he had cast a spell over her husband and children.

The principal points in the testimony were as follows. The justice of the peace testified that serious difficulties had existed between the families of Legrand and Bertrand before the house of the latter was burned. Several witnesses affirmed that in the year 1865, while Duval was an inmate of the house, the accused had an abortion, which it was suspected might have been procured. The Mayor of Esseigney asserted that on the 30th of July, 1866, Victorine Crosier came to his house at 4 o'clock in the morning, in a state of great excitement. Her statements were incoherent and contradictory, and she insisted that some one "had thrown a spell over her." The Mayor attributed her insanity to the influence of Duval, and in reference to the nymphomania, which he had observed as a prominent symptom of her disorder, he makes use of the following plain

but expressive language : “ Dans ma pensée, l'état dans lequel j'ai vu la femme Legrand, provient d'une sorte de chaleur qui lui avait été communiquée par le nomme Duval qui, pendant, un certain temps, a eu des relations avec elle.”

Dr. Perrin testified that three weeks before the commission of the crime, Victorine Crosier called to see him, and that her words and actions at that time were unquestionably those of an insane person.

The reporter recapitulates the chief points in the case as follows : Victorine Crosier was naturally weak-minded, was unfortunately married, was associated with those who were ignorant and vicious ; had difficulties with her neighbors, and domestic troubles ; became anæmic and debilitated from child-bearing and abortion, and lived under the most degrading moral influences, in an open state of adultery, which her own husband countenanced, and which resulted in a well-marked erotomania. In this case had there been no insanity there would have been modified responsibility on the part of the accused, but the extenuating circumstances were so numerous that had the evidence adduced only justified a strong suspicion of insanity, justice would have demanded a decision to the effect that there was entire irresponsibility for the crimes committed.

The reporter arrived at the following conclusions, which were adopted and acted upon by the Court :

1. Victorine Crosier, the wife of Legrand, was insane before the crime was committed.
 2. At the time of the incendiarism she acted under the sway of an irresistible impulse, which was consecutive to delusions and hallucinations.
 3. She is not to be considered as possessing her own free will. She is dangerous to herself and others, and should be confined in an asylum.
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VENEREAL DISEASES.

By F. J. BUMSTEAD, M.D., Professor of Venereal Diseases at the College of Physicians and Surgeons, New York; and F. R. STURGIS, M.D.

ART. I.—*Clinical Study of Primary Syphilitic Induration.*
[Arch. Gén. de Med., Nov., 1867.]

M. ALFRED FOURNIER draws attention to several interesting points connected with the induration of a chancre, which, although noticed by several writers, have not received the attention they deserve. These points are:

I. After the complete cicatrisation of a chancre, the remaining mass of induration may again become ulcerated, and this process may be repeated several times, the sore in each case exactly resembling the original one. This reappearance takes place spontaneously, without appreciable exciting cause, and most frequently, though not exclusively, when the induration is voluminous. Indurations situated in the furrow at the base of the glans are hence, for obvious reason, subject to this occurrence. The post-cicatricial ulceration may assume a phagedenic and alarming aspect, but the danger is more apparent than real; its progress is limited to the mass of induration, and it will heal spontaneously under the most simple treatment. Its secretion is contagious, like that of the original sore.

II. Again, large masses of induration are sometimes eliminated in another manner, namely, by softening and ulceration commencing at their centre. The central and deeper portions of the pathological deposit, after the cicatrisation of the chancre, may be converted into a kind of deliquium; an abscess is formed, the contents of which are discharged through one or more small fistulous openings. This morbid process is less frequent than the one above mentioned, ulceration commencing on the surface; both accomplish the same thing, the elimination of the indurated mass.

III. A still more curious phenomena connected with chancrous induration is the appearance of indurated

masses in the neighborhood, to which Fournier gives the name of *satellite indurations*. They may occur a few days or several weeks after the induration of the chancre, from which they are entirely distinct and from which they are often separated by a space of several centimetres. They are sometimes smaller than the initial induration, but often as large and occasionally much more voluminous; they are as well defined in their outline, and as hard and elastic as the latter, from which they can only be distinguished by the fact that their surface is not in the slightest degree ulcerated or eroded, but quite intact. They may, however, subsequently take on ulceration, like the post-cicatricial induration of the original chancre; or they may become the seat of mucous patches; and, in either case, they may lead to the belief that they are primary sores.

Ricord (*verbal communication*) says he has frequently observed such satellite indurations, and regards them as due to diffuse lymphangitis, resulting in a plastic effusion; but this view requires the confirmation of anatomical demonstration, although it is in a measure supported by the fact that they are usually accompanied by indurated cords (induration of the lymphatic vessels) running along the dorsum of the penis toward the pubes.

ART. 2.—*Use of the Spray-Producer in Syphilitic Ulceration of the Throat.* [The Lancet, October 19, 1867.]

Mr. Murchison, of the Middlesex Hospital, speaks highly of a fine spray of sulphurous acid in such affections. The smell and bad taste are removed, and the sores take on a healthy action.

[In a recent visit to the Lock Hospital, London, I found Mr. Shilletoe using the following formula as a gargle: R. sulphurous acid, oz.j; glycerine, oz.j; water, oz.vj. Mix. On trial I have found this solution too strong, and now diminish the quantity of sulphurous acid to oz.ss.—F. J. B.]

ART. 3.—*Syphilitic Aphasia*. [Gaz. Méd. de Lyon, 15th April, 1867.]

The following case is reported by Dr. Doyon, in the hope that it may tend to throw light upon a subject which is still at issue, namely, whether apoplectic symptoms be produced in consequence of mercurial treatment, or as a sequence of syphilis.

A young man, 22 years of age, was, from the nature of his business, obliged to make frequent trips to the East, and, in 1856, during one of these voyages, he contracted an indurated chancre, which was immediately treated with mercury. Some months afterward he presented mucous patches on the tonsils, and a papular eruption, which was almost general. For this he was treated successfully with mercury by M. Melchoir Robert. Some months later, while on a voyage in the East, he had a relapse, was again subjected to mercurial treatment, and recovered. This treatment lasted for three months.

Some time had elapsed without any symptoms re-appearing when this gentleman consulted M. Robert for a sick headache which had persisted for several weeks. M. Robert considered it was owing to the fatigue consequent upon a long voyage, which M. X— had just taken, and advised change of air and scenery.

This pain was described as situated in the frontal region, was not severe, and but for its persistence, the patient would not have sought medical advice. It did not prevent him from reading or working; he slept well, but on waking in the morning, the headache was a little more pronounced than at any other time. His general health was good, and he presented no symptoms of syphilis whatever.

A short time after, Dr. Doyon was sent for in haste to see M. X—. He found him sitting up in bed, agitated, giving utterance to hoarse inarticulate sounds, and making vain attempts to speak. On being fur-

nished with paper, he wrote that he had woke up a few minutes before, and found he could not speak. The only new symptom he complained of was a sense of weight in the head; the frontal headache persisted. There was no impairment of the intellect; no buzzing in the ears nor vertigo; sight and hearing were normal; in fact, the only symptom present, was this inability to speak. Pulse 80; slightly accelerated.

With this condition of things present, Dr. Doyon did not hesitate to put his patient upon a mixed treatment of mercury and iodide of potassium, and in eight or ten days his speech had entirely returned. The frontal pain was still present, but by continuing the treatment, that also disappeared in two months. The treatment was kept up for another month, since which time the patient has suffered no relapse.

Now, asks Dr. Doyon, can the nature of this lesion be determined? have we to do with a circumscribed alteration of the anterior portion of the encephalon, or with a syphilitic deposit, having its seat upon the dura mater? He inclines to the latter hypothesis, and for these reasons; 1st, syphilitic encephalitis of a portion of the brain-tissue is extremely rare, and it usually assumes the form of hemiplegia; 2d, the rapidity of the cure precluded the possibility of its being due to an alteration in the cerebral tissue. He thought it more rational to attribute it to a gummous deposit on the dura mater; an alteration which is frequently met with upon the arch of the cranium, and is characterized by a continuous localized headache. He also drew attention to the rapidity with which the accident occurred, and was entirely in favor of its syphilitic, and not its mercurial origin.

Most of the members of the Société des Science Médicales, before whom the case was reported, were in favor of the same view as Dr. Doyon; M. Gailleton citing cases in which hemiplegia occurred in the course of the disease, although no mercury had been given.

M. Diday was the only one who considered that mer-

cury was sometimes the cause of the cerebral symptoms which occur during an attack of syphilis, and quotes one case, that of a young man, who had been cured of syphilis by means of mercury. Desirous of marrying, yet fearing a relapse, he was subjected to a course of mercury, by way of precaution, and after five weeks of this treatment, had an attack of hemiplegia, which passed away as soon as the mercury was suspended. M. Diday himself acknowledged that were he to have a severe case to treat, he would have recourse to mercury, but not if it were a mild one.

M. Diday gave as additional reasons for his belief: 1st, that M. Schutzenberger had reported a case in which the syphilitic symptoms were aggravated every time that mercury was given; and, 2d, on the authority of M. Reynaud, a patient who had been treated with mercury died, and at the autopsy mercury was found in the brain. Dr. Doyon differed entirely from M. Diday's views on the subject, on the ground that his patient had had no mercury for six months previously.

ART. 4.—*Strictures of the Spongy Portion of the Urethra.*
[Arch. Gén. de Méd. April, 1867.]

M. Follet, interne of M. Verneuil at the Hôpital Lariboisière of Paris, in considering the relative frequency of strictures seated in the bulbo-membranous and the spongy portions of the urethra, arrives at the following conclusions:

1. That fibrous organic strictures of the urethra are common in the spongy portion of the canal, although often unknown.

2. That organic strictures of the bulbo-membranous region, which are stated to be frequent, are in reality rare.

3. That in all cases of strictures seated in the spongy portion of the urethra, there exists a second obstruction, situated at the distance of thirteen centi-

metres from the meatus, at the beginning of the membranous portion. This it is, which has led to the belief of the frequency of strictures in this region on the part of observers who have not noticed the presence of the stricture in the spongy portion.

4. The calibre of the penal stricture is constant, and dilates slowly and regularly. It is at times liable, however, to great variations.

5. That this second and deeply seated obstruction is due to muscular spasm; the obstruction in the penis is often very slight, and incapable of producing trouble in micturition, which is entirely owing to this muscular spasm, and that it is this spasm which offers a serious obstacle to catheterism.

6. That even in cases of organic stricture seated in the bulbous region, this spasmodic obstruction is not absent, but is situated immediately behind it.

(To be continued.)

Varia.

A NEW INVALID BED.—There is now on view at the establishment of Mr. Ward, the invalid chair-maker, Leicester Square, a new invalid bed, admitting of a much greater variety of movements than any of those at present in use. The upper framework has adjustments similar to those of an ordinary fracture-bed; permitting the body to be raised to various inclinations, and the knees to be bent to various angles. But the peculiarity is, that this framework is supported, under its centre, on a large ball and socket joint, which allows the whole framework, with its variously adjustable parts, to be moved about bodily in all directions, so as to be inclined longitudinally, laterally, or both, and to be moved round so as to face all points of the compass. By means of a simple locking apparatus, the framework is firmly fixed in any attitude that may be desired; a few turns of the handle sufficing again to

release it, and any other attitude to be assumed. Among the advantages obtained are these.

The patient may be taken out of bed, and put into bed again, without the effort ordinarily required. The ball being unlocked, and the bed being gently tipped forward, so that its lower end reaches the floor, the patient comes upon his feet; and after the sheets have been changed, or some needful act performed, he is placed with his back against the inclined surface of the bed, which, being then made to revolve backward, he lies as at first.

By a lateral instead of a longitudinal inclination of the bed, the patient may be turned over from the back on to the side, or contrariwise; saving the labor and pain often entailed by this change.

The longitudinal inclination of the bed being changeable at pleasure, the patient may lie or may sleep at any angle that he may prefer, or that is prescribed; either with the head higher than the feet, or, as it is sometimes desirable, with the feet somewhat higher than the head; the inclination being of course adjustable to a nicety and changeable at will.

The moveable framework which supports the trunk being raised, so that the trunk and legs form an angle, (which may be varied to any extent up to a right angle,) the whole bed may then be moved longitudinally round its centre of support, so that the body in this bent position may have the head and feet placed at all varieties of relative elevation. For example, while the trunk is horizontal the legs may be greatly inclined upward, an attitude that is desirable where injury of the foot or knee renders it proper to diminish the pressure of blood.

The framework that bends the knees being raised, as well as that which inclines the trunk, the same longitudinal rotation of the framework gives a great variety of partly reclining, partly sitting postures. The patient may be placed, without any effort to him, in all attitudes between that of lying horizontally and that of sitting upright in an easy chair.

These movements may, of course, be all of them joined with any such degree of lateral inclination of the bed as is desired; so that, supposing the framework has been adjusted somewhat into the form of an easy chair, and tilted forward or backward so as to bring a wounded arm or foot to the right height, the bed may be at the same time tilted sideways, so as to bring this wounded arm or foot on the uppermost side, into the most convenient position for dressing the wound.

At the same time the movement of horizontal rotation being brought into play, the whole bed may be moved round until the injured part is turned toward the light; this same horizontal rotation being, at other times, available for giving the patient change of view, enabling him to look out of the window when raised in the sitting posture, or to have his face turned away from the light if it is distressing.

To the side of the framework is fixed a movable arm, carrying a small table to support a plate or basin, and this, by a slight change of position, also becomes a reading easel.

One of the advantages of the bed, not originally foreseen, but which has come out in practice, is that of being able to make certain changes in a patient's position quite suddenly. When the ball and socket joint is but partially locked, so that a moderate force applied to the head or foot of the bed will change its position, the patient, previously lying back, may be instantly raised into the sitting posture if a coughing-fit come on.

One further use that may be named is, that when the ball and socket joint is completely unlocked so as to permit perfect freedom of movement, two attendants, seizing the handles on the opposite sides of the bed, may give the patient a little exercise by rocking the bed from side to side in the manner of a cradle.

Beyond the special advantages above described, there are some general advantages. The ability to change the posture of the patient in such a variety of ways and degrees, without any effort to him, must tend to dimin-

ish that pain, weariness, and irritability, caused by long continuance of the same attitude, or by small choice of attitudes, and must so conduce to convalescence. A further result to be anticipated is, that bed sores may be avoided, the points of chief pressure being changeable at will, and as often as is desired.

This bed, devised by Mr. Herbert Spencer, the distinguished biologist and philosophical writer, for a member of his own family, has been in use between four and five months, and has so far answered his expectations, that he has had a second made with sundry improvements, hoping that it may be of service to others. Mr. Spencer has refrained from patenting it, not wishing to place any obstacle in the way of its general use.—*British Medical Journal*.

A NEW WORK ON OPHTHALMOLOGY.—A complete treatise on Diseases of the Eye, by J. Soelberg Wells, is to appear in London next October. It will contain from 750 to 800 pages, and be illustrated by 150 wood cuts and numerous chromo-lithographs of ophthalmoscopic appearances, taken by permission from Liebreich's Atlas. The original stones are to be used in getting these impressions.

Mr. Wells is well known as thoroughly skilled in modern ophthalmic science, and his acceptability as a writer has been shown in his treatise on accommodation and refraction, entitled "Impaired Vision."

INFLUENCE OF DRUNKENNESS ON CONCEPTION.—Dr. Demeaux adduces further facts in support of the proposition that conception during drunkenness is one of the causes of epilepsy and of other affections of the nerve-centres. He attributes to the same cause a great number of monstrosities and malformations, congenital lesions of the nervous centres, etc., which prevent complete evolution of the offspring, or, if it arrive at term, cause early death.

M. SERRES, successor to Blainville in the Chair of Comparative Anatomy at Paris, has lately died, at the

age of eighty-one, and was buried at Père-la-Chaise. The funeral discourses were pronounced by M. Nélaton, (on behalf of M. Andral,) M. Chevreul, and M. J. Guérin. He has left sixty thousand francs to the Academy of Sciences, and seventy-five thousand francs to the Museum.

BLEEDING, says M. Diday of Lyons, has had its day, for it is disappearing even in the treatment of pneumonia, even in the practice of the Italian physicians. Dr. Bianchetti of Assolo, in a memoir in which he enunciates a wise caution against the employment of blood-letting in such cases, announces that he has cured without this aid several cases of inflammation of the lungs.

AT a meeting of the Medical Board of the Bellevue Hospital, held March 31, 1868, the following preamble and resolutions were unanimously adopted :

Whereas, It has pleased Divine Providence to take from among us our late beloved associate, Dr. Isaac Wood, therefore,

Resolved, That in the death of Dr. Wood we lament the loss of one distinguished not less for his professional attainments than for his purity of character and kindness of heart.

Resolved, That the able and faithful services which he performed during many years, both as physician to this Hospital and as the presiding officer of its Medical Board, entitle him to our grateful recollection and esteem.

Resolved, That the grief we experience at his death is lessened by the fact that his long and well-spent life affords a noble example of steady and conscientious devotion to our profession, of which he was one of the brightest ornaments.

Resolved, That a copy of these resolutions be published in the Medical Journals of this city.

ISAAC E. TAYLOR, M.D., *Vice-President*.

HENRY B. SANDS, M.D., *Secretary*.

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Original Communications.

ART. I.—*Cardiac Murmurs*. By J. R. LEAMING, M.D.,
Physician to St. Luke's Hospital, Attending Physician to the Demilt Dispensary, etc.

BEFORE we can properly appreciate the significance of cardiac murmurs, we must be able to demonstrate the natural sounds of the heart, or, by induction, to approach so *nearly* to demonstration that exact experiment will scarcely be necessary to make the truth more plain.

We propose, also, to consider the human chest as an acoustic instrument, a sound bearing and multiplying chamber, as well as to dispose of all ephemeral murmurs, preliminary to entering into the discussion of the philosophy of diseased or structural murmurs.

The sounds of the heart are two, the first long, and

the second short ; the periods of silence or rest are also two, the first short and the second long.

The first sound is long, commencing with a low moan, growing louder and rising in pitch as it approaches the ear, it ends *with* and is emphasized *by* the impulse-beat. Then commences the short period of silence, which is immediately interrupted by the second sound, which is also very short and flat in character, and, lastly, comes the long period of silence.

The first sound, and the second period of silence, in a healthy heart beating deliberately, take up much the greater part of the time in the round necessary to complete the act of impelling the blood into the arterial system.

Physiologists are not agreed as to the mechanism of the first sound. On the short period of silence, the second sound, and the long period of silence, there is no controversy. It has been proved by direct experiment that the second sound is caused by the sudden closing of the semilunar valves by the return shock of blood. A little hook passed into the aorta may hold up a curtain of the valve, when the sound will be absent. It is also absent when disease has incapacitated the valve. The short period of silence and the long period of silence are made long and short by the second sound dividing the period which elapses from the time when the heart ceases to contract till it commences again.

The heart has one period of action and one of repose. This, really, is all the heart has to do with it. The second sound is formed independently of the heart

by the return flow of blood in the aorta against the semilunar valve, dividing the period of the heart's rest into two unequal parts. I shall not attempt to controvert the theory of active dilatation of the heart: it cannot be necessary. I only desire to keep the simple fact clear before the mind that the heart acts, and then rests, agreeing with the law that muscular action or contraction is always followed by relaxation, and it would be singular if nature should make an exception in so important a muscle as the heart.

THE FIRST SOUND.

The mechanism of the first sound is still sub judice. If the difficulties environing this subject were swept out of the way, and the cause of the first sound made plain and convincing, it would lift the unsatisfactory points of cardiac murmurs from the obscurity of night, in which they have so long been enveloped, and place them in the clear light of day.

The majority of writers on cardiac sounds give prominence to three different theories. First, that of the friction of the blood in its motion within the ventricle and in its passage into the aorta. Second, that of the muscular contraction of the heart itself causing sound. This theory is based on the discovery of Dr. Wollaston, published in the "Philosophical Transactions of Great Britain" in 1810, of the fact, that muscular contractions cause sonorous vibrations. Third, that of the vibrations of the mitral valve caused by its closure and tension and the forcing and rushing blood.

There are other theories that scarcely need to be noticed, as they fail to satisfy any acoustic law.

Some, recognizing the possibility of each of the three causes mentioned producing sound, have believed, as the first sound is evidently composite, that it is the result of all three.

This was Dr. Cammann's opinion, and it has a greater weight of probability and more proof than either theory alone.

It is clear, however, that the cause of the first sound must be in full agreement with acoustic law. Let us see if these separate theories agree equally with the facts and the law, or if a combination of these theoretical causes can produce the first sound.

The friction of the blood, in its motion within the ventricle and in its passage into the aorta, we can imagine could produce sound; yet in a state of health, that friction must be of [minimum amount, for nature does not create obstacles in her own way. But if sound from this cause could be heard, it would be entirely different from what we actually hear. Blood in motion in a tube or vessel of irregular calibre would produce a rushing sound. It would not be vocal, nor musical, and would have no quality like that of the first sound, and therefore must be excluded.

Contracting muscle undoubtedly produces sound, but it passes no sound vibrations into the air. In order to hear the vibrations of contracting muscle, it is necessary that a sonorous body should convey them to the ear.

The sound is of very low note, the lowest that can be made by a piano string, having about thirty-two vibrations in a second.

Dr. Wollaston called the sound a *susurrus*, that is, a muttering sound, and likened it to the sound of a carriage at night in a distant street driven rapidly over block pavement about eight inches square.

Any one can hear it by placing his thumbs in his ears and resting his elbows on a table, or by closing the teeth tightly together, when all is still at night, with the head resting on the pillow.

This theory was the first that was offered to explain the first sound. But it is so unlike, having but one low note, that it is strange it should have been considered at all.

The third theory advanced, the vibration of the tense mitral valve in the presence of rushing blood, has greater probability, for it is based on acoustic truth.

The simple closure of the valve as an act, does not cause the sound, nor any part of it, it merely prepares the way. The valve being made tense, is fitted to receive and reproduce vibrations brought to it—as we shall explain presently—and of passing these sonorous vibrations into the air so that they may be heard without placing the ear in contact with the vibrating body. And yet all does not account for the first sound. The first sound is never of so low a pitch as a muscular *susurrus*; it is musical in character, which a fluid friction sound is not; a tense mitral valve in the presence of forcing, rushing blood, would not originate sound of the character we hear of itself; another sound-producing element is necessary to account for the low note gradually running up to higher pitch,

like the string of a musical instrument having its tension gradually increased by the tuner while it is vibrating.

Failing to be satisfied with either of the three reasons considered, or in their combination, because they do not acoustically demonstrate the first sound, let us examine the heart anew, and see if there belong to it any other sound-making apparatus that will fully explain, physically and acoustically, all the peculiarities of the first sound.

We naturally give our attention first to the interior of the ventricle, and we find there rough walls strengthened by fleshy columns, to which are attached tendinous strings running athwart the ventricular cavity to be attached to the mitral valve. Their object is to hold the valve from being forced from its integrity, and the contraction of the ventricular walls, with the columnæ carneæ and musculi papillares, are so beautifully contrived that exact coaptation is always perfectly maintained, so long as the valve is sufficient, no matter what functional disturbance or emotional excitement or other conditions may occur.

The valve is thin and strong, and when tense, is capable of reproducing and multiplying vibrations conveyed to it of a loud and sonorous character, though not originating them. The union of the chordæ tendineæ with the valve is an apparatus quite competent to produce all the characteristics of the first sound and to demonstrate it acoustically.

These tendinous strings, stretched across the cavity of the ventricle and rendered tense by muscular con-

traction, are the very type of a sound-producing instrument. The rushing of blood among these cords must cause vibration, which being multiplied and reproduced in the tense mitral valve, are readily passed into the air and heard without the chest wall. It seems strange that auscultators should generally have overlooked the chordæ tendineæ as the main instrument in the production of the first sound. We might as well attempt to account for the sound of the violin without the strings, as for the first sound without the chordæ tendineæ.

The silken cords underneath the window give us the weird music of the æolian harp, and the boy angling hears and feels the line singing when the hook is fast in swift-running deep water, and the sailor hears the anchor cable groan when the tide is running out; and the philosophy of one is the philosophy of the other, for the laws of sound are as immutable as the laws of light.

Let us return to the study of the beautiful mechanism of the first sound, and suppose the ventricle has been filled in the natural way—the relaxed muscular tissue of the heart has allowed the blood, welling up into the auricle, to flow freely into the ventricle through the open auriculo-ventricular opening, till it has floated the mitral valve up to its position, closing, but without force, the auriculo-ventricular opening, the heart remaining passive, being dilated by the flow of blood only. But, in due course, the auricle also becoming filled is stimulated to contract, which it does, and sends a wave of impulsion into the filled ventricle,

which, on the principle of the hydrostatic press, produces equal pressure on every part of the ventricular wall, which the ventricle acknowledging as its proper stimulus, immediately contracts, *instantly* closing the mitral valve, making tense the chordæ tendineæ, and sending the blood in its arterial course. The motion passes from above downwards, the contraction runs along the ventricular wall and through the columnæ carneæ, exactly adjusting the tension of the chordæ tendineæ, so that the mitral valve is kept in perfect coaptation, resisting the mighty force of the contracting heart, not one drop of blood being regurgitated, but all is hurled onward in its course. The resilient aorta sends back the column of blood against the semilunar valve, closing it with a shock, and the heart, exhausted as it were by the tremendous effort, lies relaxed and resting, waiting to perform the next beat in the same way.

Now let us consider the character of the sound caused by the heart's contraction. It commences in a low moan, rising in pitch, and approaching the ear as it progresses, it ends with the impulse beat.

The acoustic laws concerned in this sound are in beautiful harmony with the mechanism. At the commencement of the sound the ventricle is full of blood, and the contraction makes tense, valve, chordæ tendineæ, columnæ carneæ, and ventricular walls; the rushing blood has not yet attained its maximum velocity, the upper chordæ, which are the more tense, vibrate with the motion of the blood slowly, and the valve reproduces and multiplies the vibrations, and the drum-

like note is the result. But as contraction goes on emptying the ventricle, the sound agrees with the facts and the acoustic conditions, and becomes louder, nearer, and raised in pitch to the end.

No other theory but this accounts for the character and quality of the first sound, that harmonious note of nature, the song of health, into which, if jarring discord be introduced, it tells of functional disturbance or structural change; and the diligent and enlightened study of the discord will lead us almost unerringly to the full knowledge of the cause.

In our study of cardiac murmurs we will have frequent occasion to make reference to the "chordæ tendinæ and mitral valve theory" of the first sound, which is based on acoustic law, and which is as perfect a demonstration as we can have or expect to have.

THE HUMAN CHEST AS AN ACOUSTIC INSTRUMENT.

The human chest is an admirable instrument for multiplying and reproducing sound. It is in the form of a truncated cone. Behind, the spinal column and the firm articulation of the ribs make a basic sounding-board. In front, the sternum attached by flexible cartilages to the ribs, allowing of considerable motion, acts as a counter sounding-board, which may be brought nearer or removed further, and adjusted to the exact position for producing just the amount or volume of sound required. Below, where expansion may be most required, we find its capacity greatest, while above, where form alone is necessary, it is almost immovable. Then, the diaphragm closing the lower part of the chest has great latitude of motion, and can increase or

diminish the sound capacity of the chest at will. It is thin and tendinous, and may be fixed in tension high up in the chest, or low down, just as may be required for the purpose of forming, increasing, or diminishing sound.

Man has not invented, and may not construct a musical instrument of such varied applicability and such marvelous power. Ventriloquism is but the ingenious use of this power, for all its remarkable sound deceptions depend upon the educated diaphragm, modifying the quality of the sound of the voice. Song and speech depend on the perfection of the human chest as an acoustic instrument, for their power to enchant us with melody or to astonish us with the forcible expression of thought. The violin, the most perfect of human instruments, is formed on the model of the human chest—it has its two sounding-boards, one at the back and one in front, and it has sides and ribs. Yet it has no flexible cartilages or ribs; the anterior sounding-board cannot be brought nearer or removed further, and it has no self-adjusting diaphragm; and we may well deem it beyond the power of man to construct an instrument of equal capacity with the human chest out of unsentient materials. The violin is but the analogy of the human chest. The vibrations of the vocal cords, or the strings of the violin, are reproduced and multiplied indefinitely in the sound chamber of the human chest or the violin; they would have no volume, no reverberation, no *timbre*, removed from the acoustic instrument. Let the string be attached to a non-sonorous body and it will vibrate as well, and the pitch will

be according to the rapidity of the vibrations, but the sound will have no quality above that of a child's toy. The volume and quality of sound do not depend upon the vibrations of the string, but upon the reproducing and multiplying instrument to which it is attached. Let the instrument be ever so little injured in its acoustic conditions, the alteration in the volume and quality of sound will measure the injury. Place a non-vibrating body upon the violin, or pour sand or shot or water into it, and its power of reproducing and multiplying sound will be notably impaired, and the same is true of the human chest.

The lungs are constantly filled with air, dilating every air sack, which by active resistance and forcible contraction compresses the air to its highest dilating capacity; whilst the convertive air-tubes convey the sounds, like speaking-tubes, in every direction. This completes the perfection of the human chest as a musical or acoustical instrument.

Emphysema, or consolidation of the lung from any cause, or an enlarged heart, or an aneurism, or a tumor, or pleural effusion, may impair the acoustic qualities of the chest; and consequently the study of this subject is one of great importance to the auscultator, and this is especially true in regard to cardiac murmurs.

In the rapid rhythm of the heart's action a murmur may appear but feeble to the unpractised ear, and when the heart becomes irregular and tumultuous, it may become difficult even for the expert to read its entire significance, but should pneumonia with consolidation or

pleural effusion occur, all the murmurs would be enfeebled or disappear altogether.

I have known a loud double murmur denoting obstruction at the aortic orifice and incapacity of the aortic valve, so diminish in intensity during an illness as to be scarcely heard, and remembering this acoustic fact, I passed my ear to the back part of the chest, and found to be true what I had suspected, that pneumonia with consolidation had taken place. In this case the pulse usually was about 50 in a minute, and at this time, with passive pneumonia, it did not exceed 80, and was not diminished in force.

Pneumonia and pleuritis are not unfrequent complications of cardiac disease, and a cardiac murmur suddenly diminishing in intensity, or disappearing altogether, may direct the attention and assist in making out a correct diagnosis.

The philosophy of this novel acoustic physical sign, may be demonstrated by hanging a watch within a violin and noticing the loudness of the tick, and afterward pouring sand into it and noticing the difference of sound ; or better yet, by preparing a sounding chamber, as a drum or bass viol, with a shelf, and placing upon it a small music-box, then shutting up the chamber closely, and listening, with the ear against the chamber, or with a stethoscope, to the clearness and distinctness with which even the lowest bass notes can be heard, then after pouring in water to listen again, and notice the difference. All the sounds will be diminished in intensity, and some of the lower notes will all but or quite disappear.

With this brief consideration of these two preliminary subjects, some knowledge of which I deem absolutely essential to a proper understanding of the diseased heart sounds, we may turn our attention to

CARDIAC MURMURS.

which may be divided into those which are signs of functional disturbance and those which denote structural disease of the heart.

Functional murmurs may be divided into three kinds, those depending upon anæmia, those depending upon plethora, and those depending upon disease in some distant organ from sympathy.

The anæmic murmur is generally easy of diagnosis. The marked anæmic condition will direct the attention from the first. The murmur is loud and diffused, heard over the base of the heart, and is carried thence in every direction over the chest. It is increased by slight exertion, and has no points of particular intensity, which distinguishes it from a structural murmur. It is very noisy, and may mislead the inexperienced.

The plethoric murmur may be heard where there is a full habit with an excitable condition of the nervous system. It is most frequently heard in pregnancy, and may, sometimes, assist in making a diagnosis of that condition. The murmur is heard over the base of the heart, as are all functional murmurs, but is not loud like the anæmic murmur, neither is it heard over distant parts of the chest; it is heard alone in the region of the heart, and has a low, muffled character.

A sympathetic functional murmur has its cause in disease of some other organ, as the brain, stomach, or

uterus, and is not necessarily accompanied with either anæmia or plethora, and is caused wholly by an excited state of the nervous system.

All functional murmurs are somewhat intermittent, and always pass away with the removal of the cause. They all have their origin within the ventricle, and are owing, mainly, to irregular contraction of the columnæ carneæ and musculi papillares with the ventricular wall, bringing the chordæ tendineæ into irregular tension, and causing discord in the natural first sound.

The varying conditions of the blood account for the differences in the character of the three varieties of functional murmurs. In anæmia, the blood-vessels are not distended, the general acoustic qualities of the chest are increased, and the blood rushes along, carrying the murmur far into the blood-vessels, from which sonorous vibrations are passed into every part of the chest wall. In plethoric murmur, the acoustic conditions are decreased, and the murmur is carried but a short distance from the heart; and in functional murmurs from extrinsic disease, the conditions of the chest remaining natural, the murmur will not be so loud, nor will it be carried so far, as in anæmia, and yet it will be further than in plethora.

There are some functional murmurs that deserve particular attention. One is the systolic murmur heard in inflammatory rheumatism. It may cause needless alarm to those not fully apprehending its meaning, yet it is a warning to the intelligent physician, that will direct his watchful attention to the heart. It is an intra-ventricular murmur, and we are enabled by the rules we

have laid down to diagnosticate it differentially from an organic murmur. It is of harsh character, heard over the base of the heart, but not with maximum intensity at the apex-beat, nor is it heard with particular emphasis at the aortic orifice, or at the place where the aorta emerges beneath the sternum, nor under the clavicle. It is heard in the direction of the current of blood, but the sound is of a diffused character like other functional murmurs. Its character sometimes runs quickly into one denoting deposits of lymph upon the valves. If the murmur becomes suddenly distinct over the aortic valve, and is heard emphatically at, or near, the cartilage of the fourth rib of the right side and under the right clavicle, and on either side of the spine from the third to the sixth vertebræ behind, we know deposit has taken place at the aortic orifice, or if the murmur assumes maximum intensity at the apex-beat, we know that there has been deposit upon the mitral valve. This murmur has given rise to the opinion that acute articular rheumatism always produces some damage to the heart, which is not quite correct, for the murmur frequently subsides and passes away with the rheumatism, proving that it was only a functional murmur. A careful study of it affords a valuable index as to the treatment best to pursue to prevent damage to the heart, or when we can safely leave the ordinary treatment to take its course, knowing that the murmur will disappear as the rheumatism gets well. Its cause is probably due to spasmodic contraction of the muscles of the heart from nervous irritability of the endocardium, excited by the quality of the blood.

Pericarditis with adhesions also produce murmur, and the murmur continues as long as the adhesions may influence the symmetrical contraction of the ventricular wall. It is a sign of pericardial adhesions, but has no other important significance, for where the adhesions lengthen sufficiently the murmur will disappear.

There is also a functional murmur, associated with chorea, which has been considered as the result of cardiac disease. Cardiac disease may be complicated with chorea, but that is exceptional; the murmur of chorea is ephemeral, like all functional murmurs, and disappears with the disease that causes it. There is a peculiarity about the murmur of chorea that has given rise to the belief that it is caused by mitral regurgitation, because this murmur is emphasized at the apex-beat. In the proper place we will endeavor to show, that the apex-beat murmur is never a sign of mitral regurgitation, and we now claim that it is not, here. It is a sign, if that were necessary in this disease, of unusual and violently irregular contraction of muscular tissue of the heart, that the chordæ tendineæ are so irregularly and so forcibly brought into tension that the murmur is conveyed in the muscular tissue of the heart to the chest wall, and of course will be emphasized at the apex-beat. Regurgitation through the mitral valve never takes place except from insufficiency.

CARDIAC MURMURS—ORGANIC.

The left side, or the left heart, being mostly in front and near the chest-wall and accessible to the ear, will be considered when we speak of cardiac murmurs. This is eminently proper, as the left heart performs the im-

portant office of impelling the blood into the system, has much greater muscular development, and is much more liable to organic disease than the right heart, and as they act in perfect synchronism in health, what is said of the left will be true of the right, with such exceptions as will be noted subsequently. The left heart, like the right, has an auricle and a ventricle, two valves, the aortic semilunar and the mitral auriculo-ventricular valve, and each valve may have two murmurs, the dual character of the heart always being maintained. The aortic valve may have two murmurs, the aortic obstructive systolic and the aortic regurgitant diastolic.

The aortic systolic obstructive murmur is caused by some impediment to the flow of blood at the aortic orifice, which may be deposits of lymph, or warts, or excrescences, or it may be what is called ossification—calcareous deposits at the aortic orifice or in the curtains of the valve. It must be something that will throw the current of blood into unusual vibration, and must agree acoustically with the physical facts. The murmur, from the manner of its formation, must have certain definite characteristics that will distinguish it from other murmurs, it must agree with the mechanism of its cause. We must insist upon this fundamental truth, in regard to all the murmurs of the heart; the character of the murmur is an indication of the cause. In health the blood flows through the aortic orifice without murmur, the sounds of the heart are heard, if the ear be placed over the aortic valve, but nothing else. But let a deposit of lymph take place upon the valve, and notice of the fact will immediately be given

by the murmur. What will be the character of that murmur? This we are able to demonstrate: fluid forced through a tube of equable calibre will cause no murmur, but if obstruction at a certain point be caused by pressure upon the tube, or otherwise, a murmur will be the immediate result. The character and quality of this murmur must be, from the identity of the cause, the same as is heard when there is obstruction at the aortic orifice; it will be a fluid friction sound, and have a slushing or rushing character. Where hypertrophy has taken place, or should there be disease of the mitral valve, then the murmur will be altered or disguised by a new element of sound, which will be more particularly described when we come to speak of the mitral non-regurgitant murmur. The normal character of this murmur is only heard for a short time, for as soon as hypertrophy of the ventricle takes place as a result of the obstruction, the murmur heard will be of a composite character, for the mitral non-regurgitant murmur will be a part of the sound. It is well to keep this distinction before the mind, for the importance of the damage done is not measured by the noisy element of the intraventricular murmur, but rather by the character of the murmur formed at the aortic orifice. If the obstruction be but little, the murmur will be short in duration, not of high pitch, heard at the same moment with the first sound, and of the character of rushing fluid. If the obstruction be considerable, the murmur will be prolonged and of raised pitch, and will be more easily recognized by its dissimilarity from the natural first sound, or when dis-

cord has been introduced by hypertrophy or diseased mitral valve. This murmur may be heard best at certain points where the column of blood approaches the chest-wall, and may pass vibrations readily into the ear.

Where the aorta emerges from under the sternum on the right side, near or above the cartilage of the fourth rib, will be one of these points, under the clavicle will be another, and posteriorly on either side of the spine from the third to the fifth vertebra, and on the right side running down the scapula to its lower angle, will be diagnostic points where we may search for this murmur when we have reason to fear the cause is established. It is rarely heard uncomplicated with other murmurs; but by experience the ear learns to discriminate and to judge of the amount of obstruction and the probable damage.

The aortic diastolic regurgitant murmur is the second murmur heard in connection with the aortic valve. It is heard during the long period of silence, and with or immediately after the closure of the semilunar valve, and is caused by its insufficiency. As the result of disease, or by violence, an opening is formed in the valve which allows a stream of blood to be thrown back into the ventricle. This murmur is uncomplicated, for the intraventricular murmurs are not heard during the diastole. It has only one quality, that of blood friction, and will be prolonged or short, of raised pitch or comparatively low, according to the size or shape of the orifice allowing the regurgitation. This sound may be accurately imitated by forcing fluid

through a syringe, and by altering the aperture of the nozzle we can accurately imitate the characteristics of the aortic regurgitant murmur.

This murmur may be heard, and is most generally heard, about half an inch to an inch from the aortic valve, in a direction toward the apex-beat. Sometimes it is only heard through the sternum, sometimes it is heard as far as to the apex-beat, and sometimes it may be heard behind on the left side near the lower angle of the scapula, in the same place where the mitral non-regurgitant murmur is sometimes heard.

The reasons for these variations depend upon the direction given to the stream of regurgitated blood and the proximity of the heart to the chest wall.

This murmur generally appears in the order of succession. If, during an attack of rheumatism, a deposit of lymph occurs on the aortic valve, the murmur giving notice of the fact will be the obstructive murmur; the regurgitant murmur will not be heard at first, nor till some time afterward, when the plastic deposit following the law governing these deposits will commence to contract, and when the curtains of the valve can no more be brought into coaptation, regurgitation will ensue, and the diastolic murmur will be the sign. Or the cause may be warts or vegetations, or the deposit of calcareous matter, or it may be the result of violence, in which case it would not be or need not be preceded by the obstructive murmur. This murmur is sometimes difficult to hear. The gentle rush of blood, when the heart's action is irregular and tumultuous, requires an acute ear to catch the sound. Frequently

the altered second sound gives warning that insufficiency of the valve is about to take place.

THE MITRAL VALVE.

The murmurs connected with the mitral valve are two; the mitral regurgitant and the mitral non-regurgitant. They are both systolic murmurs. One has its diagnostic seat in the posterior chest wall, and the other in the anterior.

THE MITRAL REGURGITANT SYSTOLIC MURMUR.

In studying this murmur we must first endeavor clearly to understand the cause; for the murmur heard, to be truthfully explained, must agree not only with the physical conditions of the cause; but with acoustic law. The cause is simply insufficiency of the mitral valve. From disease or from violence, an opening has been made in the valve, and when contraction of the ventricle takes place, and the valve is made tense by the forcing of the blood and the restraint of the chordæ tendineæ, a stream of blood will be violently rushed through the opening. This will cause a murmur the character of which will be determined by the size and form of the aperture.

It will be a blood friction murmur complicated with sonorous vibrations of the mitral valve, and will be heard during the systole in the posterior chest wall.

Regurgitation through the mitral valve, generally, does not take place till the valve has been much damaged by disease.

The valve may be ruptured by violence, but this is a very unusual accident. Or dilatation of the auriculo-

ventricular orifice from degeneration of muscle may incapacitate the valve, but as a rule the murmur appears some time after a deposit of lymph has taken place, or from calcareous deposits.

The character of the murmur will be evidence as to the condition of the valve.

If the murmur be harsh and rasping as well as of the rushing character, we are safe in judging that the valve has lost its acoustic quality of reproducing sound; that it is damaged by hardened deposits of lymph or by calcareous deposits.

The murmur heard in front at the apex beat, gives notice of these deposits upon the mitral valve and of their character. This murmur is called the mitral regurgitant murmur by writers generally, but it is not a sign of regurgitation, but of damage by deposits upon the valve, and its presence will give notice that regurgitation may take place, if it have not already.

Where shall we seek for the true regurgitant murmur? In the first place we must ascertain the direction of the regurgitated stream, for the sound vibrations which it causes will go with it and proceed in the direction in which it is sent.

If the stream strike upon a substance capable of transmitting those vibrations, they may be heard through the chest wall. If we suspect insufficiency of the mitral valve, it will become a certainty beyond cavil, if we hear a blood-friction sound between the seventh and eighth vertebræ close to their spines. It satisfies the ear that the cause is found, for it rushes into the ear, as it were, and has the same character as the

aortic-regurgitant murmur, modified by the mitral valve; yet its characteristics will be recognized even in the presence of other murmurs.

Its maximum intensity is only heard between the seventh and eighth vertebræ, and there the character of the sound is diagnostic. It must not be confounded with the mitral non-regurgitant murmur which may sometimes be heard at the lower angle of the scapula, where also the aortic regurgitant is occasionally heard. The murmur may be heard from the lower border of the fifth to the upper border of the eighth vertebræ, but the characteristic murmur which renders the diagnosis certain is only heard between the seventh and eighth vertebræ; and unless heard here distinctly, regurgitation will not be proven, notwithstanding the testimony of other physical signs and rational symptoms.

The anatomical reasons for hearing the diagnostic regurgitant murmur between the seventh and eighth vertebræ are, to my mind, convincing.

When Dr. H. M. Sprague, U. S. A., was a member of the Examining Board in this city, in 1864 and '5, I requested him to demonstrate upon the cadaver the anatomical relations of the mitral valve and the left auricle with the organs between the auricle and the vertebræ, which he did a number of times, and gave me the following drawing and explanation.

“ The left auriculo-ventricular opening lies over the seventh intervertebral space, the left auricle lying over the seventh vertebræ, having the œsophagus on the left and the aorta on the right, in immediate relation be-

hind. The œsophagus overlaps the aorta somewhat in this region." This is sufficient anatomical proof. The mitral valve lies over the seventh intervertebral cartilage, and a regurgitant stream of blood would be thrown directly toward this cartilage, and the sound vibrations would be continued through the œsophagus, aorta, and cartilage to the ear. The mitral valve is near enough to allow vibrations to pass into the seventh vertebræ during regurgitation, and also the auricle lying upon it would pass vibrations into it. The pulmonary vein passing up over the sixth vertebræ would pass vibrations through it to its upper border.

All this will agree with Dr. Camman's description, that the murmur may be heard from the lower border of the fifth to the upper border of the eighth, with maximum intensity and characteristic quality between the seventh and eighth only.

Bellingham and others describe the murmur heard in front as diagnostic of mitral regurgitation, and succeeding writers and lecturers have taught the same doctrine till it has come to be the settled view of the profession. Yet I shall run the risk of being called a "setter-forth of new doctrines," by attempting to prove Dr. Camman's opinion correct and the generally received opinion in error.

In the British and Foreign Medico-Chirurgical Review of July, 1861, there is an article by J. S. Bristowe, M.D. Lond., F.R.C.P., Physician to St. Thomas's Hospital, on mitral regurgitation arising independently of organic disease of the valve.

Dr. Bristowe says that he had conducted the post-

mortem examinations of medical cases at St. Thomas's Hospital for more than ten years. He says, "It by no means infrequently fell to my lot to inspect cases of reputed mitral disease, in which all the secondary effects of that lesion—pulmonary apoplexy, anasarca, nutmeg liver—were indisputably present, but in which the heart was found to present but little departure from the healthy state, and in which all the valvular structures appeared to be perfectly sound and competent. I have felt convinced, for some years past, that these cases were neither exceptional nor rare." Again he says, before detailing his six cases, "My first object will be to prove the fact of regurgitation through the left auriculo-ventricular orifice in certain cases in which the mitral valve is found to exhibit a perfectly healthy appearance, and to establish the frequency of its occurrence, by detailing such well-marked examples of the phenomenon in question as have occurred in the hospital during the four years above specified." Dr. Bristowe's cases are related with minuteness, and give not only the signs observed during life, but also the post-mortem appearances.

After detailing his cases he says, "I have remarked that it may be regarded as an axiom, that the existence of a systolic murmur at the apex beat of the heart is a sure indication of incompetence of one or other of the auriculo-ventricular valves, and that so rarely is this phenomenon manifested in connection with the right side of the organ, that it might almost, for practical purposes, be accepted as the proof of mitral incompetence alone. This statement merely expresses the cur-

rent doctrine of the day, a doctrine which no one will call in question, and one, indeed, which cannot be controverted without entirely upsetting the present well-established principles of cardiac pathology."

Dr. Bristowe states fairly the prevalent doctrines of the day, and yet his cases prove, if they prove anything, that doctrine to be in error; that the apex-beat murmur is not a sign of mitral regurgitation.

The frequent exceptions which Dr. Bristowe mentions, where the apex-beat murmur failed to be a sign of diseased mitral valve, agrees with the experience of others.

An apex-beat murmur is almost always but not quite associated with regurgitation, but the regurgitation may take place with no murmur heard in front, and the apex-beat murmur is frequently present when there is no incompetency, and sometimes when there is no disease even of the valve. It would be interesting to know if in any of Dr. Bristowe's cases the regurgitant murmur could have been heard behind in its proper place. In one of the cases detailed it is possible that the dilatation of the auriculo-ventricular orifice was sufficient to allow regurgitation; but it seems to me there could not have been in the five others. As laid down in books and taught didactically, there are a great many more cases of mitral regurgitation than aortic regurgitation, but the sign depended upon is fallacious. When we come to scrutinize these cases and apply the proper test we find them diminish to a small number, much less than the average number of aortic regurgi-

tations. The average number of regurgitations through the tricuspid valve is still less.

Dr. Bristowe also refers to Mr. Wilkinson King's well known paper, "On the Safety-Valve Function in the Right Ventricle of the Heart." He there attributes the regurgitation which, as a normal process, takes place occasionally through the tricuspid aperture, to temporary over-distension of the thin and yielding ventricular walls, and consequent displacement and insufficient length of the muscoli papillares and chordæ tendineæ.

Dr. Bristowe, then, accepting Mr. King's theory as satisfactory in regard to the tricuspid valve, reasons that in dilatation of the left ventricle it would be assimilated in character to the right, and then the regurgitation might take place through the mitral valve. But is it ever true with either the tricuspid or mitral valve that regurgitation takes place as a safety-valve function? I shall be slow to believe it. Are they not theories made necessary to explain the inconsistency of the apex-beat murmur as a sign of regurgitation? It seems to me Dr. Bristowe's article proves the necessity of reviewing "the current doctrine of the day" that the apex-beat murmur is a sign of regurgitation through either the tricuspid or mitral valves; and I present Dr. Cammann's sign of a characteristic murmur heard between the seventh and eighth vertebræ as the only sign that really proves mitral regurgitation. This sign is infallible when clearly made out. It is possible that regurgitation may exist and this sign may not be heard, but the fact is exceptional and proves the rule.

These exceptions are, when there is effusion or pneumonia, or where there are extensive and strong pericardiac adhesions.

The frequency of regurgitation through the different valves is the reverse of what has usually been taught. The possibility or probability of sudden death, to the patient or to his friends, is a subject of alarming interest. And for that reason aortic regurgitation has been looked upon as a fearful omen. Yet it is within the experience of every physician who has seen much practice, that incapacity of the aortic valve is not incompatible with a long life. If we reject the apex-beat murmur, and confine our diagnosis of mitral regurgitation to Dr. Cammann's sign of a characteristic murmur behind, between the seventh and eighth vertebræ, agreeing with post-mortem examinations, the relative frequency of these regurgitations will be changed, and the aortic regurgitation will be first in the order of frequency, the mitral next, and probably the tricuspid last of all. I say *probably*, for I cannot point you to any certain, invariable sign of tricuspid regurgitation. Perhaps this alarming sign has been wisely hidden from us.

The following statement is probably correct. Incapacity of the aortic valve is of the greatest frequency, next of the mitral third of the tricuspid, and of the pulmonary semilunar valves least of all, if at all. I do not know of a single well-authenticated case of insufficiency of the pulmonary valve existing for any length of time during life.

The origin of the manifestations of life are first noticed in structural formation in the right auricle, and

there also is noticed the last act of expiring functional life. It seems proper, then, that we should locate the point of greatest danger in the right auricle, and that serious damage done to the tricuspid valve, involving its integrity, should be attended with great danger. With our present knowledge, it seems marvelous that the heart should go along for a time under disability, and then, without any new condition being set up, suddenly sulk and stop; and yet it is no more surprising than that it ever began, or continues for years when once begun.

The danger of the heart's suddenly stopping is probably greater when there is extensive disease invading both hearts; and if it be true that influences received through the great organic nerve hurry the heart's action, while influences received through the pneumogastric slow the heart, the sudden stopping may be but a freak of nerve influence.

THE MITRAL NON-REGURGITANT MURMUR.

Those who have followed us in our study of the mechanism of the first sound will readily comprehend what we have to say on this subject in a few words. We have described the first sound as being the result of blood rushing through and among the tense chordæ tendineæ, and of course throwing them into sonorous vibrations, which being reproduced in the tense mitral valve cause a sound of a certain character. This sound is caused by a natural musical instrument in the heart, and like the perfect artificial musical instrument, discord is proof of derangement either functional or organic. I shall include in my description of the mitral

non-regurgitant murmur, all the murmurs having a cause in the mitral valve or chordæ tendineæ, whether functional or organic, whether owing to irregular contraction of the walls of the heart or columnæ carneæ, as in functional murmurs which disappear when the nervous system returns to a state of quiet health, or to organic change in the form of the heart or its muscular attachments, or to damage done by deposits on the mitral valve or the chordæ tendineæ. The murmur is always loud and noisy, and has infinite variety. It may be of no alarming import, or it may be an indication of serious damage done to the mitral valve. It may be a soft blowing sound, diffused all over the chest, and yet seeming to follow the course of the blood-stream sent from the heart, or it may be louder, of a bellows character, heard with greatest intensity over the base of the heart, and extending but little into the column of flowing blood, and then it tells of hypertrophied ventricular walls. And if a murmur is heard in addition to this at the apex beat, loud and harsh, of varied pitch, rasping, sawing, blubbering, flapping, it is a sign that with the hypertrophy there is extensive damage done to the mitral valve. This murmur has its seat over the base of the heart, and at the apex-beat, and may run round under the axilla and appear at the lower angle of the scapula behind, on the left side, or it may pass from the apex-beat toward the sternum, just as the sound may be sent into the rib by the motion of the heart as it strikes the chest wall. It adds something to the character of the aortic obstructive murmur and to the mitral regurgitant, as heard

between the seventh and eighth vertebræ behind. It attracts the attention of the beginner, for it is easily heard, and it frequently misleads the practitioner as to the gravity of the disease. It has been, in some of its varieties, considered a diagnostic sign of mitral regurgitation, and some varieties of it have been called by eminent auscultators a "presystolic murmur," or an "auricular systolic murmur," or a "mitral direct murmur."

I think it was Grisolle who first described what he called a presystolic murmur. Dr. Gairdner, of Edinburgh, describes the same murmur, and calls it an auricular systolic murmur; and our own eminent auscultator, Dr. Flint, calls it the mitral direct.

If we allow the cause to be as is described, the name auricular systolic would be most appropriate.

It is claimed to be heard just before the ventricular systole has commenced, and to be caused by the contraction of the auricle forcing the blood into the ventricle through a diseased and contracted auriculo-ventricular orifice, sometimes appearing like a buttonhole slit. The argument is, the murmur is heard, and the disease exists, therefore the forcible passage of blood through the orifice causes the murmur. We acknowledge the facts but deny the inference. We will endeavor to prove that the murmur is not caused by the forcible passage of blood through the diseased and narrowed orifice, and secondly to account for the murmur in a more satisfactory manner.

The walls of the auricle are thin and its power is but feeble. It may be doubted that the auricle has suffi-

cient power to force a stream of blood into an empty ventricle, so as to cause a murmur that would be audible at the apex beat. And it is still more incredible that such a murmur could be formed when the ventricle is full of blood.

When we recollect that the murmur of regurgitation through the aortic valve, which is near the ear, is but feeble, and scarcely heard, notwithstanding the great force by which it is made; or the true mitral-regurgitant murmur, which is not loud and is easily observed, but which is formed with all the force of the powerfully contracting ventricle; we cannot conceive that so feeble a cause, so far removed from the ear, could make so loud and harsh a murmur. Then, too, it must be remembered that the auricle and its appendix are rather a receptacle than a motive power. The auricle is not a shut sack, and it has no valve to prevent regurgitation toward the lungs; and that a bending or folding upon itself would not be sufficient to prevent the blood being sent back with damaging effect. Again, the murmur as heard is of considerable length in duration, while the time of the auricular contraction is exceedingly short.

Harvey, as well as other observers, describes the motion of the auricle in contraction as beginning suddenly; a wave-like motion which passes immediately downward into the ventricle, instantly closing the mitral valve by contraction of the ventricle and sending the blood into the aorta. The murmur heard cannot be formed by the auricular systole, for there is no agreement in time.

And again, the murmur heard is entirely different from that of blood being rushed through an aperture, which would be like the sound of fluid being forced through the nozzle of a syringe into water, and would necessarily have a great degree of uniformity; while the sound actually heard is infinitely varied in quality, tone, and pitch.

And lastly, in disease of the mitral valve, intermission of the ventricular systole is a frequent occurrence, but not so with the auricular; that is not intermitted; and yet I have never heard or heard of an auricular systolic murmur during a ventricular intermission. I have listened carefully to a heart with extensively diseased mitral valve, where the ventricular intermission was sixteen seconds in time, and during that intermission there was silence. Are not these facts satisfactory evidence that this murmur is not caused by the auricular systole?

How then is this murmur formed? If we refer back to the argument of the cause of the first sound, it will give us the key. These murmurs are only heard when the mitral valve is much diseased, of which they are a sign. The thickening and irregularity of the mitral valve, with the irregularly hypertrophied ventricular walls and columnæ carneæ, are the physical causes of the murmur. These will produce in contraction irregular tension of the chordæ tendineæ, and especially of those in the upper part of the ventricle. Some of these cords may have slight tension or none at all and vibrate slowly, producing a blubbery murmur; while others, at the same time, may be under great tension

and give a harsh rasping murmur of high pitch. Some, from the altered form of the heart, may be brought suddenly into tension with a snap as described by Dr. Ormerod. They are all formed at the commencement of the ventricular systole, as is proved by the preponderance of the mitral-valve element in their composition, and are only varieties of the mitral non-regurgitant murmur, having their origin in vibrations of the chordæ tendineæ reproduced in the tense mitral valve, and within the time of the first sound or ventricular systole.

The murmurs connected with the right side of the heart are few, and all belong to the tricuspid valve. As before stated, the pulmonary semilunar valve is not liable to disease.

The tricuspid is liable to the same damage from deposits, etc., as the mitral, but much less frequently. Sometimes in deformity of the chest from angular curvature of the spine, the heart may be so dislocated that the right heart may be brought near the chest wall, when its sounds may be studied in the same manner as we ordinarily study those of the left heart.

A tricuspid intraventricular murmur is not remarkably infrequent, but is much less frequent than the mitral. It is heard, ordinarily, at the lower part of the sternum, or by the left side of it, over the costal cartilages; or it may be heard at the upper part of the sternum, running out under the left clavicle. It has the same character as the mitral non-regurgitant; and though more distant from the ear and less sonorous, is evidently formed in the same way. The right ventricle

is liable to hypertrophy from pulmonary obstruction, and this will produce the murmur described. This valve may also be damaged by deposits, etc., as the mitral is, and the diagnosis will be in the character of the murmur, heard over the cartilages by the left side of the xiphoid cartilage. I know of no certain sign of tricuspid regurgitation. The right auricle has its natural bed in a hollowing out, as it were, of the right lung in its middle part, and should there be a stream of blood regurgitated through the right auriculo-ventricular opening it would impinge upon the side of the auricle, and the murmur be lost in its diffusion in the lung, and would not be brought to the chest wall, unless by consolidated lung. I have never heard it, and do not know that it has ever been verified.

In a monograph on the "right side of the heart," by Thomas Mee Daldy, M.D., late President of the Hunterian Society, London, there is a condition pointed out which Dr. Daldy calls "a distensible right auricle." It is not accompanied with a murmur, but it causes the heart's sounds to be heard distinctly to the right of the sternum at the upper part and out under the clavicle, and there is dullness under percussion to the right of the sternum in the region of the auricle. This distensible condition is apt to be overlooked in post-mortem examination, for the auricle is not apparently diseased. But the fact may be demonstrated by filling the auricle with water, and by inspecting its bed in the lung, which will be found larger than usual.

Dr. Daldy says this condition is inherited, and is

connected with dyspepsia. It is the cause of certain forms of asthma or apnœa, and of frequent congestive head-aches, which sometimes end in insanity.

I think I have verified the physical conditions described by Dr. Daldy, in one or two instances.

In the foregoing paper I have endeavored to be practical, without claiming to be very original, and to give my own experience as corroborative of that of the late Dr. Cammann.*

* *On Cardiac Murmurs.* By the late Dr. CAMMANN, New York City.

[The following brief article, which has never before been published, although read before the New York Academy of Medicine, was found among Dr. Cammann's papers subsequent to his death. It is of importance in connection with Dr. Leaming's paper on the same subject, which is given above.—ED. NEW YORK MEDICAL JOURNAL.]

AORTIC OBSTRUCTIVE SYSTOLIC.

WHEN it reaches the apex it is with diminished intensity. When heard behind, it is most distinct at the left of the third and fourth vertebræ, close to their spines, and frequently extends downward along the spine in the course of the aorta, but with diminished intensity.

Although the heart extends only as high as the fifth vertebra, the murmur is heard above that point, because here the aorta approaches the surface.

AORTIC REGURGITANT DIASTOLIC.

Intensity from valve to right of apex, may or may not increase downward, depending on proximity of the heart to the parietes, position of the lungs, etc.: it may decrease downward, however, from emphysema, supine recumbency, etc.; it may perchance be loudest at the apex, but depending on the proximity of the heart to the parietes, position of parts, condition of mitral valve, etc. Generally it is not heard behind, but it *may* be, toward the inner side of the lower angle of the scapula, in thin subjects especially, in the same place where is heard the mitral non-regurgitant murmur; this mitral non-regurgitant being the mitral regurgitant of Bellingham and others. It is sometimes conveyed to the left axilla. The patient when recumbent may sometimes hear it himself.

MITRAL SYSTOLIC REGURGITANT.

To indicate regurgitation the murmur must be heard between the lower border of the fifth and the upper border of the eighth vertebræ, at the left of the spine, provided that the transmission of the sound be not interfered with by thickness of integuments or other condition of parts. When not heard in this place, but in the "left axilla and region of left scapula," regurgitation is not indicated, or, in other words, it is a non-regurgitant murmur, contrary to the teaching of Bellingham and others. If there be a sys-

ART. II.—*Cases of Foreign Body in the Œsophagus*, illustrating the use of the Bristle-Probang. By LEWIS A. SAYRE, M.D., Professor of Orthopædic Surgery in the Bellevue Hospital Medical College, New York.

CASE I.—Charles M'C—, aged 19, living at the St. Nicholas Hotel, between midnight and one a.m. of the morning of 29th April last, waked and found himself in the act of swallowing the plate to which was attached an artificial right central incisor tooth which he was in the habit of wearing. He endeavored to seize it, but the power of the muscles of deglutition was so great that he lost his hold, and the plate passed into the œsophagus. Without waiting to dress he ran to the house of a physician in Broome Street, who attempted to dislodge the obstruction by passing a sponge probang, but without effect beyond causing slight hæmorrhage. He

tolic murmur with a *maximum* of intensity between the seventh and eighth vertebræ at the left of the spine, it indicates regurgitation.

An aneurismal murmur, however, may be heard within the said limits, but it follows the aorta downward, gradually decreasing in intensity without the *abrupt* termination of the regurgitant murmur. We occasionally meet with mitral regurgitant murmur posteriorly yet absent anteriorly.

The following complication may exist, namely: aortic-obstructive systolic, with aortic regurgitant diastolic extending to the apex, with mitral regurgitant behind without a corresponding murmur in front. All of these murmurs are not unfrequently heard to the right of the apex, and even over the whole chest.

A mitral diastolic murmur we have not heard. If it be ever present, as stated by distinguished auscultators, it must depend upon physical conditions external to the heart. Pleuritic effusions or the like in certain positions, by pressing suddenly and strongly upon the left auricle, may possibly force the blood with such rapidity through an obstructed auriculo-ventricular orifice, as to cause an abnormal sound.

Some auscultators, however, deny the possibility of the occurrence of this murmur under any contingency whatever.

Addendum.—The mitral-regurgitant murmur behind may disappear, from such a change in the structural condition of the diseased valve, or from such contraction of the auriculo-ventricular opening, as will allow the valve to close during the systole; there being, in this case, actually an increase of the mechanical obstruction.

then took an emetic, which also failed to remove the plate. About 3 a. m. he went to the New York Hospital. Dr. Wainwright, one of the house surgeons, with an assistant, examined his throat with care, both with a probang and œsophageal forceps, and not feeling any foreign body, naturally inferred that the pain in his throat was due to the repeated explorations to which he had been subjected. Dr. Wainwright informs me that he passed the forceps a number of times, but was never fully satisfied that he felt any foreign body, although the patient insisted that the tooth was in his throat, and begged that it might be cut out. On the 30th, forty-two hours after the accident, he presented himself at my office. His countenance was anxious and pale; the paleness and debility being explained by the fact that he had been unable to swallow anything since the accident. The head was thrust forward, and fixed in a stiff and awkward position, the respiration had a peculiar wheezy character, the voice was husky and rasping. On either side of the neck, just behind the sterno-cleido-mastoid muscles, and about an inch below the thyroid cartilage, a slight fullness could be detected; pressure upon these points produced a sense of suffocation, and placing his finger just above the sternum, he said the tooth was cutting him at that point.

I passed a whalebone probang down the œsophagus without obstruction, and also a pair of curved forceps, and could feel no foreign body. I again pressed his neck, and he stated that the tooth cut him "just here," putting his finger at the point just above the sternum

before mentioned, and that the "hook" on the plate was caught "just here," putting his finger on the right side of his neck. I then asked him if he could describe the plate or make a drawing of it, when he made a rough diagram, which gave me a very good idea of the size and shape of the body in the œsophagus. It also explained the position of the plate in the throat, and I at once perceived that while the œsophagus was distended by the plate extending from side to side, the probang and forceps had readily passed through the concavity of the plate, and had been withdrawn without touching the latter.

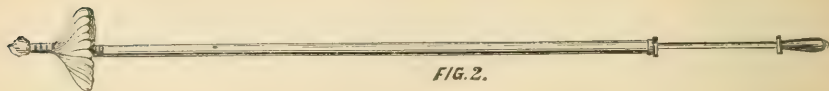
I therefore determined to use the *bristle probang*. This instrument was invented I think by a surgeon in the East India service, but whose name I have never heard. For an emergency occurring some weeks previously, I had made one of these instruments in the following manner. I took an ordinary No. 10 elastic catheter and cut off about one inch from its lower end, I then ran through it a flexible whalebone about three inches longer than the catheter, and tied on its end a small piece of sponge. I then took to pieces an ordinary paint brush, and tied one end of the bristles around the sponge, completely surrounding the whalebone rod with them. The other end of the bristles I tied around the cut extremity of the catheter.



FIG. 1.

Fig. 1, (one fourth natural size,) represents the instrument when complete. By a slight twisting, the

bundle of bristles can be reduced in diameter to about the size of the catheter. By holding the catheter firmly with one hand, and with the other drawing upon the rod so as to bring the sponge toward the catheter, each of the bristles is bent into a loop, and the whole bundle is converted into a disc about five inches in circumfe-



rence, (Fig. 2,) large enough to completely sweep the œsophagus and to remove any foreign body lodged therein.

The sponge having been dipped in water, the instrument was extended, and was readily passed the entire length of the œsophagus without obstruction; it was then distended in the manner described, and slowly withdrawn with a slightly twirling movement, so as to sweep all parts of the tube, and fortunately brought out the plate and tooth riding on its meshes without difficulty, and with scarcely any pain.

The plate had at either extremity a hook fitting to the teeth for its retention in the mouth, besides a number of smaller points and ridges for the same purpose. Its dimensions were about two and a quarter inches from hook to hook, by one half inch wide. The tooth and gum which projected above and below the plate at right angles to it was about five eighths of an inch in length by one quarter in width. (Fig. 3.)

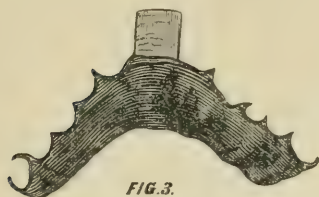


FIG. 3.

The lad had some tenderness in swallowing for a few days, which soon passed away.

CASE II.—On the 2d of May I was called in great haste to see Mrs. M—, Fifth Avenue, the messenger stating that she was “choking to death from a fish-bone which she had just swallowed while eating dinner.” I took with me an instrument which Messrs. Otto & Reynders, 64 Chatham Street, had made for me after the pattern described in Case I, and which was more perfect than the one I had myself extemporaneously devised. When I arrived I found Dr. Ellsworth Elliot in attendance. The patient was in a great state of excitement, and complained bitterly of an intense pain in the ears. The finger thrust far down into the œsophagus did not touch the foreign body.

The instrument was introduced and withdrawn in the manner described in Case I, and brought with it the scapula of a codfish, measuring one and one quarter

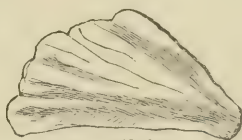


FIG. 4

inches in length and seven eighths in breadth at the wide end. (Fig. 4.) A slight hæmorrhage followed,

which soon ceased on the administration of pieces of ice.

After a few days, during which the diet was restricted to articles which could be swallowed without difficulty, such as raw oysters and ice cream, the lady was able to swallow as easily as usual.

CASE III.—Tim. —, coachman of Mr. Mott, Stryker's Bay, came to me one morning early in the Spring, complaining of pain in the throat from a fish bone which he had swallowed the night before at dinner. The finger, probang, and forceps failed to detect anything, and I then made the instrument which I afterward used in Case I, and by its use I succeeded in extracting a halibut bone near two inches in length and quite sharp at one end. It had so distended the œsophagus as to allow the instruments previously used to pass without engaging the foreign body.

Although the instrument I have described has been many years in use, it does not seem to be as generally known to the profession as it deserves, and for this reason I have thought it advisable to publish the foregoing cases.

Upon inquiring at the New York, Bellevue, and Charity Hospitals, I find that none of these institutions have it in their collection of instruments.

The great advantage of this instrument over the ordinary forceps, or the penny-catching double hook, is that the elastic pressure of the looped bristles so completely distends the œsophagus, that the foreign body rides out on the top of the brush without any resistance from the muscular contractions which would otherwise

take place, from the irritation which would follow the attempt to remove a rough or jagged body through a muscular tube.

The simplicity of the instrument, and its ease of construction, are also points of value, particularly to the country practitioner who has not the facilities of the instrument-maker's shop, since any surgeon can, upon emergency, make one for himself at a moment's notice.

ART. III.—*A Case of Acute Laryngitis accompanied with Tubercular Deposits in the Left Lung, treated by Nitrate of Silver Injections into the Larynx and Trachea.* By WILLIAM H. SHERWOOD, M.D., Unionville, Ohio.

As no case treated in this manner has yet been made public, I will describe the present one as minutely as possible, hoping that success in this instance may lead to a new form of treatment of diseases of the air passages.

The patient, Mr. H. W—, is unmarried, aged 26, five feet eight inches in height, of slender stature, light brown hair, blue eyes, and fair complexion; his pulse 110, blue tinge around the gum, scantiness of hair on the chest, finger nails incurvated. I saw him for the first time February 20th, 1868. His head was thrown back, and he was suffering from extreme dyspnœa, and inability to articulate above a whisper, and difficult deglutition. After ascertaining the history of the case I learned he had had several attacks of hæmoptysis, with a cough attended with purulent expectoration. Notwithstanding he was somewhat emaciated, there

were no marked hectic symptoms. Over the left subclavian region pectoriloquy was perfectly distinct, with amphoric respiration; his right lung seemed quite free from any tubercular deposit.

Seeing him in this painful condition, and thinking that the ordinary remedies at least were unsatisfactory in their effects, I resolved to employ a method which I had dwelt upon for some time past, namely, to apply an astringent solution directly to the inflamed membrane. On account of the apparent uncertainty of introducing a solution through the rima glottidis, as recommended by Bretonneau, Trousseau, and by American surgeons such as Horace Green and J. Warren, I determined to inject the larynx by piercing the cricothyroid membrane by the point of the hypodermic syringe, which operation I performed after previously rendering the parts insensible by means of rhigolene passed through an atomizer. After passing the longest tube of the hypodermic syringe without difficulty into the larynx, half way between the upper border of the thyroid and the lower edge of the cricoid cartilage, and exactly in the mesial line, my assistant, Dr. M. P. Brainard, filled the hypodermic syringe, holding one fourth of an ounce, with a solution of nitrate of silver containing five grains to the ounce. The tube was then screwed on to the syringe and the solution thrown into the larynx. This produced not so much strangling as is witnessed after the introduction of the sponge by the mouth, and was shortly followed by coughing, with expectoration, and marked relief. I prescribed three drops of *veratrum viride*, to be taken once in

six hours, and ten grains Dover's powder at bed time. Upon seeing him the next day, the dyspnœa and difficulty of deglutition had nearly ceased, and he was quite cheerful. I directed him to take one tablespoonful of cod-liver oil three times a day, and made an issue under the left clavicle.

I then determined to treat the existing tuberculosis by means of injection. On April 21, 1868, at 2 p. m., assisted by Dr. M. P. Brainard, I injected the lungs by piercing the trachea between the cricoid cartilage and the isthmus of the thyroid gland, and injected a solution composed of ten grains of argentum nitras to the ounce. I found that this produced no dyspnœa, but was followed by some cough and expectoration. He was ordered to continue his constitutional remedies as before. When I again saw him, he was somewhat improved, cough less harassing, pulse less frequent, and felt a little stronger; consequently, on April 27, I injected as before, with similar results.

As the patient will continue under my treatment, I will take notes and publish them hereafter; but I consider this sufficient to demonstrate that medicines can be injected into the larynx and lungs through the trachea with impunity. This method saves the uncertainty and danger of inserting a tube or sponge into the rima glottidis, and is simple and painless in its performance. For the treatment of laryngitis in my hands it has proven successful; and its trial in diseases of the air passages is urged.

Reports on Progress of Medicine and Surgery.

SURGERY.

Prepared by E. S. DUNSTER, M.D., Physician to the Out-door Department of Bellevue Hospital.

ART. 1.—*Removal of Large Nasal Polypus by External Incision.* [King's College Hospital Reports. Medical Times and Gazette, October 19, 1867.]

SIR William Fergusson lately removed a very large nasal polypus affecting both nostrils, the peculiarity of which was that by its continued growth it had expanded the cartilages and the nasal bones on both sides, but, instead of thinning them, had thickened them to an inordinate extent; the upper part of the nose was greatly expanded, giving it a very peculiar appearance. The patient said it had been removed twenty or thirty times. Sir William, finding that it was impossible to remove it entirely with polypus forceps, determined to remove it from the outside. This was effected as follows: An incision was made from the ala nasi up toward the inner angle of the eye down to the expanded cartilage and bone. The thickened cartilage was then detached with cutting forceps, and with it a portion of the bone to which it was attached. The polypus was then seen immediately beneath it, and extracted in the usual manner. A similar proceeding was adopted on the opposite side. The wounds were brought together by sutures; the nose was restored almost to its normal size and appearance. Sir William Fergusson stated that it was the only case of this kind he had ever seen.

ART. 2.—*On Naso-Pharyngeal Polypi.* By THOMAS P. POCK. [St. George's Hospital Reports, Vol. 2, 1867.]

A condensed statement of the history and pathology of these growths, with a description of the various op-

erative procedures which have been suggested for their removal. These may be classified, namely:

1st. The plan of removal through the roof of the mouth, as proposed by M. Nélaton.

2d. The removal of the whole superior maxilla; first proposed by M. Flaubert, of Rouen; and modified subsequently by Maisonneuve, who advised the removal only of a portion; and again by Langenbeck, who suggested the displacement and replacement of a portion of the bone as performed in Dr. Cheever's case; and still further by M. Roux, who advised displacement of the whole bone.

3d. Laying open the cavity of the nostril in various ways as performed in Sir Wm. Fergusson's case.

4th. Removal by the ligature or *écraseur*; and

5th and finally, removal by passing a galvanic current through the tumor.

Mr. Pock's paper gives the literature of the subject, and includes two cases operated on by the second and third methods respectively at St. George's Hospital.

The *Gazette des Hôpitaux* contains an account of an operation by M. Fleury at the Hôtel Dieu, performed in accordance with Maisonneuve's modification of Flaubert's method, the second above noted. The tumor had existed for eighteen months, was fibrous in structure, and weighed nearly two drachms. The patient, a boy of eighteen, although for a long time in very feeble condition, ultimately made a good recovery. This is the third case in which M. Fleury has operated by this method.

ART. 3.—*Excision of the entire Clavicle.* By W. W. DAWSON, M.D. [Cincinnati Lancet and Observer, January, 1868.]

The operation was performed for necrosis of the bone, and was an entire success. The patient has now complete use of his arm with no impairment of strength.

ART. 4.—*The Present State of Surgery in Paris.* By SAMPSON GAMGEE, Esq. [Lancet, August 31, *et seq.*, 1867.]

An unusually interesting series of papers in a historical and biographical point of view. They are too lengthy for reproduction in our pages, and do not strictly come within the scope of our report, but they are delightful reading and contain much valuable information.

ART. 5.—*Synopsis of Five Hundred Fractures treated in the Boston City Hospital in three years, from June, 1864, to June, 1867.* By DAVID W. CHEEVER, M.D. [Boston Medical and Surgical Journal, December 26, 1865, *et seq.*]

The relative order of frequency was as follows:

Fracture of the femur.....	75	Fracture of the toes.....	5
“ “ clavicle.....	68	“ “ tarsus.....	5
“ “ fibula and tibia.....	58	“ “ body of scapula.....	3
“ “ humerus.....	49	“ “ cricoid.....	3
“ “ radius.....	46	“ “ patella.....	3
“ “ radius and ulna.....	35	“ “ nasal bones.....	3
“ “ fibula.....	27	“ “ many bones.....	3
“ “ ribs.....	23	“ “ spine.....	2
“ “ tibia.....	22	“ “ both femurs.....	3
“ “ skull.....	20	“ “ both legs and femur.....	4
“ “ lower jaw.....	14	“ “ both legs.....	2
“ “ fingers.....	11	“ “ upper jaw.....	1
“ “ pelvis.....	9	“ “ sternum.....	1
“ “ metacarpus.....	5		

Total.....500

Ligamentum patellæ, 2. Dislocat. clavicle: acromial end, 2; sternal end, 1. Total, 5.

The cases possessing special interest are given in more or less detail, making a valuable contribution to the statistics of surgery.

ART. 6.—*Removal of an enormous Osteo-Sarcoma of the Lower Jaw. Death.* By Mr. CHRISTOPHER HEATH. [Lancet, December 21, 1867.]

At the University College Hospital, London, on the 20th of November, Mr. Heath, assisted by Mr. Erich-

sen, Sir Henry Thompson, Mr. Marshall, and Mr. Berkley Hill, removed a tumor of the lower jaw of unusual size. The patient, aged 32, first noticed the growth eleven years ago. After a severe pain resembling a toothache, a small hard swelling appeared below the right canine tooth, which was not decayed, nor were any teeth in its vicinity diseased. The swelling continued about the same size for five or six years, during the latter part of which time it was entirely free from pain. Four years ago it began to enlarge, and after a fall on the face two years subsequently, it increased in size very rapidly and involved the whole right side of the jaw.

On admission to the hospital the following appearance is presented: The mouth and all the lower part of the face are occupied by an enormous tumor. The measurements of this are as follows: from the lobule of one ear round the chin to the lobule of the other ear, $19\frac{1}{2}$ inches; from the border of the lower lip across the chin to the pomum Adami, 13 inches; from the angle of the jaw across to the same point on the opposite side, 14 inches. When the man is sitting, the tumor rests upon the top of the sternum; but it moves freely when he opens and closes the mouth. Between the lips, of which the lower is much stretched, so that the circumference of the mouth measures $9\frac{1}{2}$ inches, there is a red granulating mass of disease, which comes in contact with the upper lip; but when the mouth is opened, a space intervenes through which a second mass, covered with the mucous membrane of the floor of the mouth, can be seen almost in contact with the roof of the cavity, and completely hiding the tongue. Between these two masses some of the teeth can be felt and seen. From beneath the cheek on the right side a foul, yellowish discharge constantly exudes. An inch below the lower lip is a large red fungous mass, covered with healthy granulations; this extends to the lower border of the tumor, and the skin is adherent around it. On the right side, just below the angle of the jaw, there is another smaller fungous projection; but the skin on

the left side is perfectly healthy, though much stretched. The right ramus of the jaw cannot be defined, though the angle can be indistinctly perceived. The articulation, however, is not involved. The tumor, though overlying the neck, in no degree involves its tissues, and there are no enlarged glands either below the jaw or in the neck. On the left side the whole of the ramus and angle can be clearly made out, the disease stopping short of the latter point.

After some days of preliminary treatment by strong nourishment, the operation was performed as follows: The patient being under the influence of chloroform, an incision was made through the lower lip in the median line and carried round the right side of the fungous protrusion to the bottom of the tumor. The skin was then rapidly dissected back; and then returning to the middle line, Mr. Heath made a second incision on the left side of the fungus, meeting the former one above and below, and dissected back the skin off the tumor as far as the jaw. The bone being isolated, the second molar tooth was drawn, and a narrow saw applied at that point; but before complete division was effected the weight of the tumor caused it to break away. As had been prearranged, Sir H. Thompson then grasped the tongue, which was now seen for the first time, and transfixed the tip with a stout needle and ligature, by which it was held until the operation was concluded. On dividing the mucous membrane beneath the tongue, a large lobulated mass came into view imbedded among the sublingual muscles; and this being dragged forward, the muscles were divided close to the tumor, and one or two bleeding vessels were secured. The tumor being then turned over to the right side, Mr. Heath carried the knife upward, so as to clear the coronoid process, which was healthy; but this appeared to be driven forward against the malar bone, and tightly jammed, so that forcible traction made on the tumor failed to clear it. Grasping the process itself with the lion forceps, Mr. Heath succeeded, however, in wrench-

ing it out, when the condyle of the jaw, also healthy, immediately came forward without any dissection. A little dissection round the posterior margin of the tumor now completely disconnected it, and it was removed. About half a dozen bleeding vessels were now tied, none of them of large size, the two facial arteries having been preserved uncut. Finding the bone on the left side where the tumor had broken away rough and irregular, Mr. Heath sawed it cleanly through, close in front of the wisdom tooth.

There was now an enormous gap; the fauces, tongue, and front of the larynx being fully exposed, and the flap of skin on each side being pendulous and superabundant. The right was somewhat ragged, owing to the perforation which had taken place, and also owing to its being so adherent to the tumor that it had been perforated at one or two points; Mr. Heath therefore removed a portion of it, adapting the opposite flap to it. The lip was then brought together with three harelip pins and a twisted suture, and the remainder of the incision was held together with four silver sutures, placed some distance apart so as to allow discharge to escape. The thread holding the tongue was next secured to the harelip pins, so as to bring the apex of it close to the lip; and some lint was placed in the large cavity, and a bandage externally, so as to check oozing and maintain the shape of the part. The patient was then carried to bed. Not more than three ounces of blood were lost.

The patient did well for two or three days, but sank and died on the sixth day after the operation. The tumor was fibro-cellular in growth, and weighed four pounds six ounces. It is said to be the largest of its kind on record since Mr. Syme's case in 1828.

ART. 7.—*Mechanism of Death in Gangrene.*

At a recent meeting of the Paris Academy of Medicine, Prof. Parisc, of Lille, presented a paper on this

subject, which may be summed up, namely: 1. Gangrene of the extremities sometimes gives rise to sudden death. 2. This is due to the formation of putrid gases within the veins of the gangrenous limb, when eruption of these gases takes place toward the heart. 3. The mechanism of death is the same as in introduction of air into the veins during operation. 4. Such a termination is to be feared in deep-seated humid gangrene having a rapidly invading course. 5. In these cases we should promptly interfere by immediate amputation of the limb, if this be not otherwise contra-indicated. 6. When this is deemed inadvisable we should resort to deep incisions, compressing the principal veins of the limb at its upper part.

ART. 8.—*Compression of the Trunks of Large Arteries for the Cure of Articular or Phlegmonous Inflammation of the Limbs.* By M. le DR. VANZETTI. [Gazette des Hôpitaux, November 21, 23, 1867.]

We have taken occasion twice recently to refer to this subject in the JOURNAL, (August and December, 1867.) Dr. Vanzetti's paper, however, is the fullest exposition of this subject we have yet met with. Dr. Vanzetti claims that digital compression is usually sufficient to accomplish the end desired, and thus the dangers attending the operation of ligation of a large artery are obviated. This plan was proposed by Vanzetti some ten years since, but has not thus far been looked upon with much favor, nor indeed is the plan generally well known to the profession. Neudorfer, a distinguished military surgeon of the Prussian army, states that in the external idiopathic inflammations he has entirely abandoned the common antiphlogistic methods of treatment, and that he now employs only the digital compression. He has tried it in over one hundred cases, and is satisfied of its superiority to all other plans of treatment.

ART. 9.—*On a rare Form of Injury of the Leg.* By RICHARD QUAIN, F.R.S., etc. [British Medical Journal, August 31, 1867.]

In his able Address in Surgery at the late anniversary meeting of the British Medical Association in Dublin, (British Medical Journal for August 17,) Dr. R. W. Smith describes an instance of very rare form of injury, the separation of the lower epiphysis of the tibia. "The disjunction" (to quote some of Mr. Smith's words) "of the lower epiphysis of the tibia is undoubtedly among the rarest in this class of injuries. I am not aware of any well authenticated example of it having been placed upon record, with the exception of one that I published in 1860." . . . "The patient was a boy aged 16 years." . . . "I did not see him until six months after the occurrence of the accident."

On account of the infrequency noticed by Dr. Smith, it occurs to me that the publication of a case observed by myself very soon after the accident which caused it, may contribute something toward completing the history of the injury. I therefore send an outline of the case from notes made at the time.

On October 22, 1851, a well-built, healthy-looking lad, 17 years of age, was admitted into University College Hospital on account of an injury near his left ankle, which occurred on the same day a short time before his being brought to the hospital. The patient stated that while dragging a piece of iron about twelve feet long over a heap of earth in the street, he slipped and fell, his left foot being doubled under him. No further account of the position of the limb in the accident could be got.

The entire injury was found to be at the lower part of the leg. "The tibia there projects forward; and below the prominence is a depression, between it and the foot. The projection of the bone is an inch and a half higher than the lower margin of the fibula, and

three quarters of an inch above the lower edge of the malleolar process of the tibia. The space between the prominent tibia and the end of the great toe on the injured side measures three quarters of an inch less than in the other foot." The ankle-joint was uninjured.

Two other facts I looked upon as peculiar to this injury—diagnostic of it; namely: 1. The edge, so to call it, of the displaced bone was rounded; and the end or lower surface was felt to be smooth, and as it were rugous; very unlike the hard, angular, almost sharp feel of actual broken bone, and corresponding exactly with the condition of a bone not fully developed, where the epiphysis is connected with it by cartilage. 2. There was an absence of the soft swelling which surrounds the broken ends of bone where any displacement exists, the swelling occasioned by the effusion of blood from vessels torn by the sharp bone at the seat of fracture. Swelling likewise accompanies the displacement of bone at a joint. In that case, however, it results from increased secretion of synovia, not from blood. It was, no doubt, the freedom from swelling which permitted the outline of the prominent bone and the hollow below it to be so clearly defined as they were. The same circumstance permitted the easy examination of the edge and the end of the bone where it projected.

The diagnosis made out at the time was, separation of the shaft of the tibia from the epiphysis. The case has not hitherto, I believe, been published, except in the account of it given to pupils in the ward of the hospital and in a clinical lecture.

The replacement of the bone and the treatment (by means of starched apparatus) presented no difficulty and no circumstance requiring notice.

Dr. Smith's case above referred to is as follows:

The patient was a boy, aged 16 years. While leaping, he fell with his right foot doubled under him and forcibly extended on the leg. I did not see him until six months after the occurrence of the accident. At

first sight the case might readily have been mistaken for one of luxation of the inferior extremity of the tibia forward. The normal curve of the tendo Achillis was greatly increased, and the lower end of the tibia seemed to project considerably in front of the normal position of the ankle-joint. The foot was a little extended on the leg when at rest, but the boy had the power of flexing it; and, when standing, he was able to place the sole flat on the ground. The fibula was uninjured. A very short examination was sufficient to show that the injury was not a luxation of the tibia forward at the ankle. The integrity of the fibula, the comparative freedom with which the motions of flexion and extension could be performed, the perfect application of the sole of the foot to the ground in walking, were all circumstances opposed to the idea of a true luxation existing. The internal malleolus was placed further back than natural, being on plane posterior to the margin of the projecting portion of the tibia; and the distance between it and the tubercle of the tibia fell short of that between the articular margin and the tubercle of the opposite side by more than a quarter of an inch. From all these conditions, taken in connection with the age of the patient and the mode in which the injury occurred, no rational doubt could be entertained of the case being one of separation of the lower epiphysis of the tibia, and partial displacement of that process backward with the foot. I think we are tolerably safe in saying that the pathognomonic sign of this injury is, that the internal malleolus preserves its natural relations to the foot, but not to the leg or outer ankle; while, in the case of luxation of the lower end of the tibia forward, the reverse occurs, the normal bearings of the inner ankle to the foot being lost, while those to the leg are preserved.

ART. 10.—*Considerations Suggested by the Study of One Hundred Cases of Stone in the Bladder of the Adult.*

By SIR HENRY THOMPSON. [British Medical Journal, August 17, 1867.]

Sir Henry Thompson read a paper on this subject before the Surgical Section of the British Medical Association at its meeting in Dublin, of which the following is an abstract. "The cases were not selected, but were simply those which had occurred in the author's practice during the last three years and a half. Not a single case applying was refused operation; that, in the worst cases, being the only chance of life. They were all adults, the children's cases being omitted. The following facts were noted. Of the 100 cases, 84, or about four fifths of the total number, were operated on by lithotrity and 16 by lithotomy. The mean age of the 84 lithotrity cases was $62\frac{1}{2}$ years; among them were no less than 21 cases of 70 years and upward, 2 being upward of 80 years of age. Among these 84 cases there were only 4 fatal cases. The lithotomy cases, 16 in number, had a mean age of $63\frac{1}{2}$ years. The youngest was 42, the oldest was 80 years; 6 were above 70 years of age, including 1 each of 77, 78, and 80 years; 6 cases were fatal. Of the entire 100 cases of operation upon unselected patients, having a mean age of $62\frac{2}{3}$ years, and submitted to either lithotrity or lithotomy, there were 90 recoveries and 10 deaths. These cases must be considered as less promising cases than the product of any given district. Four propositions were deduced from the facts stated. 1. Lithotrity is the most successful operation for at least four fifths of all cases of stone in the adult which come under the surgeon's notice at the present time, a statement which is more definitely expressed in the fact that the rate of mortality for such cases in this series is barely five per cent. 2. Lithotrity can be thus successful only when it is performed on a definite system in accordance with certain practical rules which experience has determined,

and which can be laid down. 3. Cases of calculus, in which one of the two operations, lithotrity or lithotomy, ought not to be performed, are excessively rare. 4. By exercising an ordinary degree of vigilance for adult patients suffering from symptoms of urinary disorder, every case of calculus may be discovered in an early stage, may be successfully treated by lithotrity, and, consequently, the operation of cutting for stone may be rendered obsolete, or applicable only for some very exceptional example which has been developed as the result of extreme neglect or ignorance."

In this connection we may note that Sir William Fergusson has recently been performing lithotomy by a method which he styles a modification of the old Celsian operation of "cutting on the gripe." A staff is used as in the ordinary median or lateral methods, but the external incision is crescent-shaped, with the horns downward and enclosing the anus. The fore and middle fingers of the left, with their dorsal surface looking upward, are then introduced into the wound, and directed horizontally forward so as to push back the rectum and to embrace between them the bend of the staff, thus furnishing an effective guide to the groove. The operation is then completed as in the lateral method.

ART. II.—*Acupressure*. By PROFESSOR WILLIAM PIRRIE.
[British Medical Journal, August 31, 1867.]

Professor Pirrie's paper, read before the British Medical Association, is a summing up of the merits of this plan of arresting hæmorrhage, and includes a description of the seven methods of application of the acupressure needles. There are illustrative wood cuts rendering the description very readily comprehensible. He claims that acupressure is perfectly reliable in controlling hæmorrhage, and that union by the first intention is more easily attainable with this than with any other method; twenty-one out of fifty-one cases showing

absolute primary union without the formation of a single drop of pus, a state of things which he believes never did and never will exist, where ligatures are used and allowed to come out through the incised wound. Acupressure has also the following other advantages over the ligature. 1. A briefer sojourn of a foreign body in the wound. 2. The foreign body is of a less irritating character, owing to its being of a metallic and not of a textile nature. 3. Acupressure is the easiest of performance, and the quickest of all methods of arresting hæmorrhage. 4. The needle is removable at pleasure, instead of after a tedious process of ulcerative destruction and more or less of accompanying suppuration. 5. The comfort which the patient early enjoys from knowing that, as far as vessels are concerned, all further interference and suffering are at an end. 6. The diminished risk of the occurrence of pyæmia, owing to suppuration not being an inevitable consequence of the mode of arresting hæmorrhage. It is a remarkable fact, that as yet there has not been a single instance of pyæmia in any case where acupressure has been employed by my hospital colleagues or by myself.

In conclusion, I have only to add that, having given acupressure a fair and unprejudiced trial, I have no hesitation in stating that I am a decided believer in its advantages; that my appreciation of its merits is such, that I regard it as the greatest improvement of modern times in the treatment of incised wounds; and that, with chloroform for preventing pain during operations, and with acupressure, aided by metallic sutures, perfect rest of the wounded part, and the avoidance of all dressings, much suffering to patients may in future be averted, and the success of an important department of practical surgery greatly increased.

ART. 12.—*Complete Division of the Median Nerve with Preservation of Sensibility.* [Lancet, Nov. 30, 1867.]

There is at present, in the wards of Professor Richet, at La Pitié, a case which is exciting much interest, and giving rise to much speculation on account of the numerous physiological problems that it involves. The history of the case is, briefly, as follows: On the 23d of October, the patient, a female, aged 24, fell heavily on some sheets of copper which were standing by, and was severely wounded at the wrist. She was taken to the Hôtel Dieu, where the radial artery was tied by the house-surgeon. Twenty-two hours after, M. Richet examined the wound. It measured six centimetres across the wrist, and was situate at about six centimetres above the radio-carpal articulation. The superficial muscles were found divided. The radial artery was completely cut through, *as was the median nerve*, and the flexor profundus itself bore marks of injury. Yet sensibility of the lower end of the nerve was unimpaired. The patient screamed with pain as M. Richet excised a minute portion of it for microscopical examination. All the parts to which the median nerve is distributed had likewise retained their sensibility.

Now admitting the fact of the complete division of this nerve, and this we can hardly doubt in view of M. Richet's recognized ability as an anatomist as well as a surgeon, and also in view of the fact that the application of electricity by M. Duchenne de Boulogne failed to elicit any contraction in the muscular parts supplied by the median nerve, an experiment which appears to M. Duchenne to be conclusive and demonstrative of the fact assumed, how are we to account for the preservation of sensibility? for there can be no question of this, as the case has been seen and examined with great care by Professors Richet, Denonvilliers, Pajot, Michel, Duchenne, and many others. The general bent of opinion seems to be to the assumption of some sort of anastomosis between the injured nerve

and the other nerves of the hand. This hypothesis is put forward in the French medical journals, and is supported by quotations from the physiologists Claude Bernard, Vulpian, Longet, Magendie, and others. M. Richet has withheld his own explanation, which will appear when he gives a detailed account of the case.

ANEURISM.

Unusual attention has lately been paid to the subject of the treatment of aneurism, and the foreign journals are overflowing with accounts of cases, treated by different methods, and exhibiting very varied and irregular results as regards success and rapidity. A great objection to many of the cases is that they are reported too early to enable one to judge of the real value of the result attained.

Our limits will not allow a full *resumé* of the subject, and therefore, by the way of facilitating the labors of any of our readers who may be disposed to work up the subject, we merely place on record the titles of the most important recent papers and cases.

ART. 13.—*Large Aneurism of the Femoral Artery successfully treated by Compression of the Abdominal Aorta.* At the Middlesex Hospital, London. Service of Mr. GEORGE LAWSON. [Lancet, October 26, 1867.]

ART. 14.—*Treatment of Aneurism. Advantages of completely Arresting the Current through the Sac.* By E. D. MAPOTHER, M.D. [British Medical Journal, October 5, 1867.]

Notes on the Rapid-Pressure Treatment of Aneurism. By W. MURRAY, M.D. [British Medical Journal, October 5, 1867.]

Both these papers were read at the Dublin meeting of the British Medical Association, and elicited consid-

erable discussion, the general bent of which was decidedly in favor of the method of rapid pressure treatment. Dr. Mapother's paper includes two successful cases, one of ileo-femoral aneurism, treated by pressure on the common iliac, the other of popliteal aneurism treated by pressure on the femoral in Scarpa's triangle.

Traumatic Aneurism of the Orbit. Ligation of the Common Carotid. Cure. By J. Z. LAURENCE, M.B. [British Medical Journal, October 5, 1867.]

Digital Compression of Aneurism. By Prof. VANZETTI. [Medical Times and Gazette, November 16, 1867.]

SPLEEN.

ART. 15.—*Removal of the Spleen.* By M. le DR. PEAN. [L'Union Medicale, November 26, 1867, and Medical Press and Circular, December 25, 1867.]

In the JOURNAL for May, 1866, will be found an account of the three cases up to that time on record, of this formidable operation. These cases were Quittenbaum's, in Rostock, 1826; Küchler, of Darmstadt, in 1855; and Spencer Wells, of London, in 1865. All three proved fatal. We have now to put on record four other cases.

Pean's case was operated upon on the 6th of September, 1867, with the expectation of finding and removing an ovarian tumor. The patient, M^{lle} Adele Cercily, twenty years of age, had always enjoyed good health until the appearance of the tumor, which had been some two years in forming, and attended by severe pain, localized generally in the right iliac fossa and not relieved by treatment. August 20th she consulted M. Pean, prepared to undergo any operation which promised relief for her intolerable sufferings.

The following are the results of the examination made at that date:

General health greatly debilitated, advanced anæmia, great disorder of digestive functions, dysmenorrhœa, slight embarrassment of respiration. The patient complained of febrile attacks and diffused neuralgic pain.

She was in a state of exhaustion from her sufferings; there was no œdema, yet a little embonpoint.

The abdomen was increased in size, and presented a considerable prominence in the hypogastric region, while there was scarcely any fullness in the hypochondria and lumbar regions. The prominence was nodulated on its surface, but, in other respects, was similar by position, extent, and form, to the gravid uterus in the last months of gestation. The circumference of the abdomen measured one metre ten centimetres.

Palpation produced a little pain in places; the consistence of the tumor varied; fluctuation was very distinct in the median line and on the right side. At the surface of certain elevations, particularly on the left side, the consistence was firmer, solid, and recalled that of a fibroma.

On percussion there was absolute dullness all over the surface of tumor, and sensation of fluid over a great part of its extent. Resonance all round it, in the epigastric, hypogastric, and especially in the lumbar regions. The tumor appeared clearly defined at its circumference, and, in particular, at the superior margin. It was completely immovable.

Digital examination found the hymen entire. The uterus, of normal size, appeared wedged in the thickness of the tumor, which rendered it immovable, and formed, anteriorly and posteriorly, a projection which depressed the vaginal walls. The finger easily detected the existence of fluid on pressure and percussion being made on the hypogastrium. The greater solidity of the tumor on the left side and below, led to the opinion that it was developed in the left ovary, and the pain caused on this side by vaginal pressure, excited a fear that numerous adhesions existed.

The operation was undertaken in the usual method for ovariectomy. An incision was made in the median line from the umbilicus to the pubes; the abdominal wall, which was quite thick, being divided in layers, and the peritoneum being opened on a grooved director. Four

ligatures were applied to bleeding vessels in the parietal tissue before the peritoneum was divided. There was no free fluid in the cavity of the abdomen. The anterior surface of the tumor was in close contact with the abdominal wall, and was covered in by the firmly adherent omentum. A cyst was then punctured through the omentum and about three litres of thick viscid brownish-yellow fluid escaped. The tumor being now diminished in size, the hand was passed into the peritoneal cavity, and the omentum was detached from the pelvis and the tumor from below upward. No hæmorrhage requiring a ligature followed. Next, search was made in the direction of the ovary to discover the situation of the pedicle. None was found, and moreover it was evident that the tumor had no connection whatever with any of the pelvic organs or its appendages. Attention was then directed to the mesentery, as it is well known that cysts resembling ovarian are sometimes developed in this tissue, or even in the parenchyma of the kidney, but the result of the examination was only negative.

The external incision was then prolonged toward the left and about four fingers' breadth above the umbilicus, and the cyst was drawn outward. It now became evident that the tumor was an hypertrophied spleen, and that the cyst had developed in its anterior and inferior portion.

The surface of the tumor was furrowed by vessels, and marked posteriorly by a large venous trunk of one and a half centimetres in diameter. In spite of the extent of the incision the immediate extraction of the whole tumor was rendered impossible by its situation, it was determined, therefore, to remove it in several pieces. Bearing in mind the disposition of the arterial system of the spleen, and how it is divided into tracts independent of each other, ligatures were applied in succession to the several branches of the splenic artery, so as to circumscribe and isolate that part of the spleen containing the cyst. The large vein which extended

on the posterior surface having been first tied as near as possible to its junction with the splenic vein, the inferior part of the tumor was cut off, and no hæmorrhage followed the section. The superior part of the tumor, consisting of about one third of the whole mass, had now become accessible. Some intestinal and omental adhesions were detached, and gave rise to no hæmorrhage which compression of the vessels did not arrest. If the structure of the spleen had undergone no degeneration whatever, but had been perfectly healthy, it would have been impossible to preserve the remaining portion of the organ. For the nature of the tissue rendered compression by a clamp impossible, and besides the clamp could not be drawn out, nor maintained in the superior angle of the wound, because the mass which would serve as its base was situated too deeply in the sub-diaphragmatic hollow of the left hypochondrium. Moreover, the extent of the cut surface of the spleen was too extensive to strangulate.

The extraction of the last portion of the spleen was proceeded with as follows:

First of all, four metallic ligatures were carefully placed on the gastro-splenic omentum, as near the spleen as possible, in the short space which separates it from the tail of the pancreas and the bulging end of the stomach. According to all probability, these ligatures would include all the vessels and remove all risk of hæmorrhage. However, in order to guard still better against the immediate danger, the remaining portions were removed by the actual cautery, after having compressed them in a special clamp made for the purpose of obtaining by compression of the tissues, linear eschars. These successive cauterizations reached the extreme limits of the spleen below the ligatures so thoroughly that there did not remain a vestige of the splenic tissue. The four metallic sutures were next cut close and left in the cavity of the abdomen. The patient had not lost one hundred grammes of blood by the operation. During the examination of the cyst no

portion of the fluid escaped into the abdomen. Nevertheless, no precaution necessary in such a case was omitted, and the peritoneal cavity was sponged out after the intestines had been carefully cleaned. The wound was then closed, and nine metallic ligatures were inserted in the abdominal parietes, at a good distance from the edges of the incision, and including the parietal peritoneum. Five twisted sutures were placed on the points which opened between the ligatures.

The operation, thus terminated, lasted a little more than two hours. It had been performed without any remarkable loss of blood, with the exception of that contained in considerable quantity in the tissue of the tumor. During the whole of the operation the patient was kept in a state of perfect insensibility. The chloroformisation was so complete that it required nearly half an hour to restore her from her profound artificial sleep. During the day and night following the operation, there was no fever; the pulse was eighty, the respiration was again easy; the patient complained only of malaise, and had occasional vomiting, due to the action of the chloroform. She took a little cold broth and some stimulating drinks.

Subsequent to this date the patient had scarcely a single unpleasant symptom and made a speedy recovery, leaving her bed for the first time on the tenth day after the operation.

Examination of the Tumor.—The tumor was examined immediately after the operation; it was of the color and consistence of hypertrophied spleen. The mass first removed constituted the cyst walls, and formed about two thirds of the morbid mass; it weighed 1140 grammes. The walls of the cyst were of variable thickness; at certain points they were thin and reduced to a fibrous membrane, in other places, on the contrary, they were two or three finger-breadths in thickness, and were composed of a reddish soft structure, of an appearance similar to that of the spleen. The structure of this tissue was examined by Dr. Ordonez. This able

observer recognized, under the microscope: 1. A great number of unaltered blood corpuscles. 2. A very large quantity of the glomeruli of Malpighi, hypertrophied to such a degree that it was easy to isolate them by the aid of a lens. 3. At certain points where the substance was much thinned, these elements were seen to disappear successively, and to give place to a very close network of fibrous tissue, which in spots alone formed the cyst wall. The wall itself was traversed on the exterior by a great number of blood-vessels of all sizes. The interior of the cavity was smooth and covered in places by hard patches composed of carbonates and phosphates of lime and magnesia. The fluid contents did not differ materially from those found in some ovarian cysts. The fluid was thick, of a brownish yellow color, and contained a large proportion of albumen, white corpuscles in various degrees of degeneration, and lastly, some calcareous granules.

ART. 16.—*Operation de Splénotomie, suivie de quelques Indications historiques.* Par M. E. KOEBERLE. [Gazette Hebdomidaire, October 25, and November 8, 1867.]

Koeberle's operation was performed on the 21st of September, 1867. The patient, a married woman, forty-two years of age, and of strong constitution, had been in perfect health up to the year 1864. She had had four children, the youngest at that time five years of age. In November, 1864, after an attack of bronchitis, she noticed a swelling in the left side of the abdomen, which gradually extended so as to involve the whole hypochondrium and lumbar region. Toward the close of 1865 the left leg became swollen and œdematous, but this disappeared spontaneously. There was no intermittent fever in the locality where this patient lived, and she had never had this disease. Menstruation was always regular up to March, 1866. At this time the

spleen enlarged very rapidly, and the catamenia were absent six months. They reappeared in September, 1866, but gradually lessened in quantity, until after April, 1867, there was complete amenorrhœa. While the spleen was enlarging a collection of ascitic fluid formed, which subsequently disappeared, reducing the circumference of the abdomen from 1.45m. to 1.12m., but notwithstanding this diminution of size, the spleen continued to enlarge and extended over the hypogastric region. In a year's time it increased ten centimetres in length, the distance from its lower extremity to the border of the left hypochondrium being forty-five centimetres. Its anterior border is sinuous, presenting two deep depressions. It was hard, and appeared to be regularly hypertrophied throughout its entire substance. It was not adherent to the abdominal walls, but it is impossible to determine whether or no there were adhesions to the diaphragm. The urine contained considerable albumen, and there was still some ascites.

The patient was put on the use of iodide of potassium for many months without any marked effect. In 1866, the chloride of sodium in large doses was prescribed, but under this treatment the spleen began to grow even more rapidly than before, and then a proposal was made to extirpate the tumor. To this the patient readily consented, but the operation was postponed, and in 1867, she came under Professor Shutzenberger's care. He continued the chloride, and also gave squills and tannin, but the treatment proving of no avail, he advised the operation of removal as the only alternative, and the patient, fully aware of the gravity of the operation, accepted the risk.

The patient being under the influence of chloroform, an incision was made in the median line from the xiphoid cartilage to the umbilicus, large enough to admit the hand for a preliminary exploration of the upper part of the tumor, and to determine whether there were adhesions to the diaphragm, and if so, whether vascular or not, and whether they could be torn with safety. Such

adhesions were found, but they did appear to be of such a nature as to contra-indicate the operation. The incision was extended in both directions, its whole length being thirty centimetres, (nearly twelve inches.) The inferior extremity of the spleen was then easily brought forward. A portion of the omentum was ligated and detached, and then ligatures were placed upon the enormously developed vessels which supplied the tumor, and made as it were a pedicle. This was ligated in six or seven portions, in each case ten ligatures being applied, and the incision made between them so as to avoid loss of blood. The splenic artery was as large as the femoral. The principal vein was two and a half centimetres (nearly one inch) in diameter. The upper part of the tumor was attached over its whole extent to the diaphragm; these adhesions were broken down with every possible care, and the tumor thus removed. It weighed six and a half kilogrammes (about thirteen pounds) after some three litres (nearly two quarts) of blood had drained from it. The patient lost a good deal of blood during the operation, which lasted one hour and a half, and it was found impossible to control the hæmorrhage, especially from some of the smaller vessels, and the adhesions to the diaphragm. The intestines were replaced in the abdominal cavity, which was carefully sponged out, the ligatures cut short and returned, and the external incision closed by sutures, in hopes that the pressure of the intestines against the bleeding surfaces might control the hæmorrhage, but all to no avail. The patient never recovered consciousness, and died evidently from the hæmorrhage.

M. Koeberle appends to his case an historical account of the recorded operations of splenotomy, overlooking, however, Mr. Bryant's cases. In addition to those we have referred to, he notes the following:

Zacavelli,* in 1549, operated on a young woman

* Fioravanti, *Thesaurus vitæ humanæ*, liv. II, c. viii, p. 26.

twenty-four years of age, whose spleen was hypertrophied and very painful. She recovered in twenty-four days.

Mathias,* in 1678, removed the spleen from a young man twenty-three years of age, who had received a sword cut in the left side. The spleen made a hernia and came entirely through the cut. Mathias placed a ligature around the vessels and excised the tumor against the advice of counsel. A hæmorrhage supervened which was controlled by a styptic powder, and the patient recovered within three weeks, and six years afterward, when the case was published, was in perfect health.

Fantoni† reports a case where Ferrarius, in 1711, removed with no little difficulty a spleen which had made a hernia through an opening of an abscess below the umbilicus. The patient recovered and lived five years subsequently. In both these cases there was no hypertrophy.

These two cases, both authentic, as well as many recorded instances of partial removal of this organ in man, go to show that the spleen is not a very important organ and is not essential to life, and M. Koeberle, taking these cases (to which we may now add Pean's) and the numerous experiments made upon the lower animals as a test, proceeds to vindicate the operation, and claims that in spite of the unpromising results thus far obtained, the operation should not be peremptorily discarded. His line of argument is ingenious, but fallacious, and is supported by illustrations from the history of other grave surgical procedures which are now conceded justifiable, but at the outset were no more successful than splenotomy. It in no way alters our conviction that the operation is both unphilosophical and unjustifiable.

* *Ephem. med. phys. N. C.*, Dec. II, an. III, 1684, p. 378.

† *Opuscula medica et physiologica*. Geneve, 1738, p. 195 et 203.

ART. 17.—*Case of Excision of the Spleen for an Enlargement of the Organ attended with Leucocythæmia*, in a patient under the care of Dr. Wilks. By THOMAS BRYANT. [Guy's Hospital Reports, vol. xii, Third Series.]

Mr. Bryant's operation was performed on the 20th of June, 1866. The patient, a groom, aged 20, was admitted to the hospital May 30, 1866. From a child he had been remarkably healthy, and had never suffered from any illness. His parents were then alive and healthy. Had lived in a marshy district all his life, but had never suffered from ague. Was regular and temperate in his habits. First noticed a hard mass in left side of abdomen about six months previously. This slowly enlarged, but has not seriously incommoded him or prevented his work. Had lately lost flesh to a great extent and suffered from heaviness at the forehead, dizziness, dimness of sight, tinnitus aurium, and pain between the shoulders. Has had no epistaxis or swelling of legs. The color of his skin on admission was a peculiar yellow cast, the conjunctivæ being of a pearly hue. Eyelids delicate and drooping. Sleepy aspect of face, and has an appearance of great listlessness. The tumor "fills up the whole of the left side of the abdomen, leaving a small space above its outer extremity on the right side between it and the xiphoid cartilage, where the transverse colon is pushed forward, and a small space between its lower border and the pubes. The tumor is very dull on percussion, and the dullness is continued up over the chest as high as the third rib, extending toward the axilla as high as the upper border of the fifth rib, and behind as high as the sixth dorsal vertebra." The dimensions of the swelling are as follows:

Between the anterior superior spinous processes of the ilia.....	inches 18
Between the xiphoid cartilage and the pubes.....	13
From the most extreme point of the tumor which can be felt, to the eighth rib...	9
From that spot to where the dullness ceases.....	6

Whole length.....	15
At its broadest part in the abdomen,	6½

A drop of his blood examined under the microscope, showed the white corpuscles more numerous than the red, and collected together in masses, with the red corpuscles in rouleaux between them. Acetic acid dissolves the red corpuscles, and brings into view in the white corpuscle a large well-defined nucleus, which appears in some as a single rounded or elongated body, in others as if divided into two or more portions.

The case was deemed to be of such a nature that no drug could promise any relief, while in the absence of all organic disease except in the spleen, an operation might afford a possibility of success, death otherwise being imminent. The question of removal of the organ was submitted in all its bearings to the patient, and he accepted the slender chance promised by operative interference.

The operation was begun at 2:30 p. m., and at 4:50 p. m. the patient died. Meantime he had recovered from the anæsthesia; appeared quiet and comfortable; answered cheerfully to questions, and breathed easily; but a few minutes before his death he became suddenly pale, extremities were cold, pulse, profuse perspiration, and he had two or three convulsions. There was no difficulty met with in performing the operation. The external incision was five inches in length from the cartilage of the eighth rib to the anterior superior spine of the ilium. There was no hæmorrhage of account, although after death a large clot weighing one and a half pounds was found in the abdomen. The pedicle was tied in two halves and returned into the abdomen, the ligatures (of stout whip-cord) being cut short off. The spleen weighed four pounds seven ounces.

Mr. Bryant informs us that he undertook the case with some amount of satisfaction, as it appeared to come under those conditions in which some hope of success could be entertained; and he adds that should another example of uncomplicated spleen tumor, by which the life of the patient is probably threatened, come into his hands, he should certainly make another

attempt at the operation. This opportunity we believe has since been offered him, and he availed himself of it, with an equally unfortunate result.

ART. 18.—*Case of Excision of the Spleen for an Enlargement of the Organ, attended with Leucocythæmia; with Remarks.* By THOMAS BRYANT. [Guy's Hospital Reports, Third Series, vol. xiii.]

Female, aged 40. Had perfect health until present illness. Never has lived in any ague district, or had any symptoms of that disease. Two years and three months before admission into hospital (September 27, 1867) she noticed a sensation of fulness in the stomach and bowels; at this time no swelling in the side. This feeling of fulness continued until October, 1867, when, having caught cold, she felt severe pain all over the left side; no fever or shivering. A surgeon detected *hardness*, which the patient herself could then feel. Fomentations, plasters, etc., were applied, and she became free from pain, and went to work again as housemaid. The hardness, however, continued, and she began to get weaker. Any cold brought on severe pain in the side, which was especially felt on lying down. For six months prior to admission had had occasional epistaxis. For some time had been unable to lie on right side, breathing being difficult in that position. Bowels had been relaxed all the time. Nine months before, menstruation had suddenly ceased, and since then increased pain had marked what would have been the menstrual periods. She gradually grew weaker. She was very white and thin, the veins appearing very plainly all over the body. Skin white and transparent, hot, and moist. She says she always feels hot, and at night perspires profusely. Temperature in axilla 98° Fahrenheit, at 11 a. m. Slightly wasted. Impulse of heart felt between the fourth and fifth ribs, and also between the fifth and sixth; heart-sounds loud, tumultuous,

and irregular. A systolic bruit, probably mitral, is especially loud at apex. Pulse 84; respiration rather loud, but otherwise healthy. An occasional feeling of nausea; no pain in shoulders, nor jaundice; occasional spasms; abdominal distension three or four hours after taking food; appetite fair; three or four loose motions daily; urine scanty (22 oz.), s. gr. 1014, and slightly albuminous; legs œdematous. At the umbilicus abdomen measures thirty-six and a half inches round, increasing one eighth of an inch with inspiration. Ensiform cartilage pushed upward and forward on itself, so that it points perpendicularly to the skin. A large tumor, with well-defined outline, extending over the left side and centre of the abdomen; resonant in no part; reaches as high as sterno-xiphoid articulation, and the dullness on percussion as high as the nipple, over the ribs of the left side. The outline of the tumor can be traced from the ensiform cartilage along the middle line of the abdomen to about two inches above the umbilicus, where it passes gradually over to the right side, and at the level of the umbilicus is two inches to the right of its centre; it continues to incline to the right till its border passes underneath the centre of Poupart's ligament, the rounded angle which it forms here being plainly felt. The anterior surface of the tumor is in contact with the anterior wall of the abdomen; its lower border cannot be felt above the symphysis pubis. When the patient is in an upright position, its margin posteriorly extends obliquely downward and outward, from the top of the eleventh rib to the crest of the ilium, about two and a half inches from the left sacro-iliac synchondrosis; below this it seems to dip toward the pelvis. The position of the anterior border varies according to the distension of the bowels, as much as half an inch. The measurement from the centre of the umbilicus to the spinous processes of the vertebræ is on the left side eighteen and a half inches, and on the right side eighteen inches. The blood, taken from the finger, examined microscopically, showed

the white corpuscles rather more numerous than the red ; more numerous than in Mr. Bryant's first case. The red corpuscles adhered very closely to one another, occupying much less space than the white.

The operation was done November 9, 1867, under chloroform. An incision was made in the left loin, beginning below the ribs at a point corresponding to a line extending upward from the anterior superior spine of the ilium, and curving downward and forward in front of the crest. This line of incision was selected as it was supposed to correspond to the horizontal line of the spine, giving control to the pedicle and preventing its being stretched or lacerated, and allowing too of the removal of the very large organ in the readiest way. The peritoneum was opened, and the lower part of the spleen turned out, there being no adhesions. The upper part of the organ was then carefully separated from its connections with the lower surface of the diaphragm, these parts being in close contact by means of innumerable soft sponge-like adhesions ; these gave way before the hand, tearing like rotten sponge. The pedicle was then isolated, being about four inches in diameter ; it was ligatured in four portions with strong whip-cord, and the spleen cut off. No bleeding from the pedicle. At this time some blood was seen to trickle from the wound, and on raising the ribs the left hypochondriac region was found to be filled with blood. This was at once removed ; no large bleeding vessels were found, for the blood came from the sponge-like adhesion which was torn through, connecting the spleen with the lower surface of the diaphragm. All attempts to arrest the hæmorrhage were fruitless. The wound was closed, the abdomen bandaged, and the patient put to bed. She survived her removal fifteen minutes.

Autopsy.—The cervical, mediastinal, mesenteric, lumbar, and iliac glands were much enlarged. The region of the spleen had more than a pint of blood in it. The liver weighed one hundred and thirty-eight ounces ; flat, spread out, and very flaccid. Microscop-

pical examination showed enormous quantities of lymphoid corpuscles between the hepatic cell columns. The spleen after removal weighed ten and a quarter pounds. Its surface was pretty even, and marked with several pale yellowish patches, entering deeply into the substance of the organ; they were composed of the splenic tissue, altered only in color.

Mr. Bryant remarks, that the first point which will attract attention is the fact that nearly all the glands of the abdomen, and others in the body, were more or less diseased; and that the nature of the disease of these glands was apparently a free infiltration of the several tissues with lymphoid corpuscles. In the previous case of Mr. Bryant, the same condition existed, though in a less degree. He adds: "Under these circumstances one is naturally tempted to the conclusion, that in these cases of leucocythæmia the disease of the spleen is only part of a more general affection; and that as a consequence the operation of splenotomy as a means of cure is physiologically unsound and surgically unscientific. I am willing to confess that, to my own mind, these conclusions have now considerable weight, and tend to prove that the operation of splenotomy for leucocythæmia is based on a wrong foundation, and as a consequence should not be performed. It is physiologically unsound, and surgically unsafe." (See this *Journal*, vol. iii, p. 147.)

Mr. Bryant adds that "a surgical objection of great weight must be advanced against splenotomy for leucocythæmia, and that is the hæmorrhage, a difficulty which cannot be foreseen, and if foreseen cannot be conquered. These observations are well supported by Dr. Koeberlé's case, which died of bleeding from the small vessels of the ruptured adhesions. The successful case of Dr. Pean, of ablation of a splenic cyst, and complete extirpation of the hypertrophied spleen, is of no importance as far as our present argument stands, for in his case there is no record of the fact that leucocythæmia existed. It is of value, however, in supporting

the argument, that a spleen may be removed from the human subject as it may from the animal without life being necessarily destroyed."

VENEREAL DISEASES.

By F. J. BUMSTEAD, M.D., Professor of Venereal Diseases at the College of Physicians and Surgeons, New York; and F. R. STURGIS, M.D.

(Continued from the last Number, p. 188.)

ART. 5.—*Stricture of the Urethra.* [Arch. Gen. de Méd., April 7, 1867.]

The case is that of an old man who came under treatment for incontinence of urine, resulting from a stricture. He had had gonorrhœa for eighteen to twenty months. The presence of a tight stricture, situated at the bulbous portion of the canal, was diagnosed. There was no hypertrophy of the prostate.

Unsuccessful attempts were made to dilate the stricture, which induced urethral fever, under which the patient succumbed, eight or ten days after his admission into the hospital.

At the autopsy, the following condition of things was seen to exist; purulent catarrh of the bladder, and purulent nephritis. The urethra, laid open through its entire extent, revealed at the commencement of the spongy portion a very tight stricture formed of nodulated tissue. The canal at this point was spanned over by a bridge of cicatricial tissue, having beneath it an opening large enough to admit a pin. The surrounding tissues were indurated to a great extent. M. Fontan, who reported the case, thought that at some anterior date an erosion of the mucous tissue of the urethra had existed, and that there had resulted infiltration of plastic material. He also called attention to the fact that the prostate was not, as usually obtains in old men, hypertrophied, but was atrophied, which tended, in his opinion, to support the views advanced by MM. Mercier

and Brown, of the curability of prostatic hypertrophy by urethral strictures.

ART. 6.—*Tertiary Syphilis of a Malignant Character.*
[Ibid., April 14, 1867.]

This case, reported by Dr. Laroyenne, is that of a man thirty-five years of age, who, without any known primary lesion, was the subject of pustules upon the forehead and lips, which disappeared without treatment. Two months after, this eruption became general, presenting the following appearances. The pustules were of the size of cherries, circumscribed, of a doughy consistence, and covered with a dirty green moist scab. In the intervals between them were seen cicatrices of previous pustules. The soft palate was the seat of numerous ulcerations; and all the lymphatics within reach were indurated. M. Larayenne thought them specimens of the so-called “plaques muqueuses” of the skin, which, although in reality papules, are larger, more elevated, and more exuberant than are the ordinary forms, and are excavated in their centre.

ART. 7.—*Engorgement of the Spleen in Hereditary Syphilis.*
[Ibid., April 21, 1867.]

Mr. S. Gee, at a meeting of the Royal Medical and Chirurgical Society of London, stated that, in a quarter of the cases of hereditary syphilis, engorgement of the spleen was present. The degree of the engorgement, according to Mr. Gee, gave, to a certain extent, an indication of the gravity of the diathesis. In children who survive, this splenic engorgement lasts for one or two years, and is characteristic of the disease, even when the disease is extinct. M. Victor de Méric here very rightly observed, that in any cachexia the sanguineous and lymphatic glands were, in common, liable to

become engorged ; and, moreover, inasmuch as syphilis empoverished the blood, it would be a sufficient cause, although not a specific one, to account for the engorgement of the spleen which occurs.

ART. 8.—*Urethritis from External Causes; Consequent Epididymitis.* [Ibid., April 28, 1867.]

In this case the urethral discharge seemed to have arisen from masturbation, assumed the same appearances and symptoms that it does when arising in consequence of sexual intercourse, and ended in epididymitis of the right testicle.

ART. 9.—*Syphilis a Cause of the degeneration of the Noblesse.* [Ibid., April 28, 1867.]

Vide New York Medical Journal, vol. v, p. 364.

ART. 10.—*Prolapse of the Urethral Mucous Membrane in Women.* [Ibid., April 28, 1867.]

After stating that this affection is frequently seen in women affected with blennorrhagia, and that it is more frequent in women than in men, owing to the subjacent cellular tissue being lax in that sex, M. Merle goes on to give the mechanism of the prolapse.

Under the influence of inflammation the mucous membrane becomes thickened and swollen ; and being constantly pushed forward by the stream of urine, it at length protrudes. This our author says marks the first stage.

If the inflammation become chronic, or the blennorrhagia frequent, this hernia of the mucous membrane becomes a soft tumor, painless to the touch, and grooved along its upper portion for the passage of the urine. This tumor is in the majority of cases reducible ; is

of the size of a small nut; does not interfere with micturition, and grows slowly. This increase in size lasts only during the inflammatory stage, but the tumor always attains to a certain size before it ceases growing. The writer finishes his paper by calling attention to the difference between mucous polypi of the female urethra, and this prolapse.

ART. 11.—*New Cure (?) of Blennorrhagia.* [Ibid., April 28, 1867.]

Dr. Küchler proposes to cure recent urethral blennorrhagia by destroying the superficial layer of the epithelium of the urethra by means of the following caustic injection:

R. Arg. nitr., dr.j; Aquæ, oz.ss.

This is retained in the urethra for fifteen or twenty seconds, and is then immediately followed by a concentrated solution of common salt.

ART. 12.—*Syphilis Contracted from Cigar Stumps.* [Ibid., April 28, 1867.]

M. Ambrosoli reports in the *Giornale Italiano della Malattie Veneree* two cases of syphilis, contracted by chewing the stumps of cigars picked up in the street. The primary lesion was seated, in one case, upon the anterior pillar of the soft palate, in the second case upon the palatine arch.

ART. 13.—*Observations upon "Bubons D'Emblée."* [Ibid., May 19, 1867.]

M. Diday, in a paper read before the *Société des Sciences Médicales de Lyon*, advocates the possibility of a spontaneous bubo occurring without any antecedent ulcer to account for it, upon the person bearing this

bubo. The lesion, from whence this bubo springs, in the woman, is a chancrelle, (chancroid) and he thinks the pus is carried along the lymphatics, producing no trouble until it reaches the ganglia in the groins. He admits that it is often impossible even to discover this lesion in the woman, but he argues that given this bubo in the man, the chancroid must have existed in the woman.

ART. 14.—*Epidemic of Syphilis among the Glass Blowers of Montlucon.* [Ibid., June 2d and 9th, 1867.]

This epidemic arose from a strange workman being employed at the factory, who, at the time, presented no symptom of the disease other than caries and supuration of the nasal cavity. Nine persons were infected, and in all a chancre was the commencement; in five the sores were large and obstinate to treatment, in the rest they were small and of short duration. They were all labial. In all, there was well marked adenitis of the submaxillary ganglia. Secondary symptoms appeared in all the cases, varying in intensity according to the strength of the individual.

It is curious to notice that, so far as could be learned, the wives and children of these men had remained intact.

ART. 15.—*Prophylactic Liquid against Chancrous Infection.* [Ibid., June 12, 1867.]

Ferri perchlor., acidi citrici, acidi hydrochlor., aa dr.j; aq. destillat., oz.j. M. This is used at the Antiquaille Hospital of Lyons, to prevent the extension of a chancre. A piece of charpie is soaked in this fluid and retained upon the ulcer for two hours.

ART. 16. — *Blennorrhagic Rheumatism and Secondary Blennorrhagic Symptoms.* [L'Union Médicale, January 17, 20, 22; February 16, 19, 21, 26; March 5, 16, and 19, 1867.]

Some of these papers advocate the belief in a blennorrhagic diathesis, others are opposed to such belief. That of M. Fournier furnishes such excellent arguments against the former view, that we transcribe it here in full.

The non-existence of a Blennorrhagic Rheumatism. [Ibid., January 20 and 22, 1867.]

Dr. Alfred Fournier, in his second communication on this subject made before the Société Médicale des Hôpitaux, confines himself principally to refuting and answering objections which had been made to his former paper by various gentlemen. [See MEDICAL JOURNAL, Vol. iii, No. 6.] He begins by relating two cases of blennorrhagic sciatica, the first occurring in a patient of Dr. Lepère, the second in his own practice. He then objects to the use of such terms as blennorrhagic infection, constitutional alteration, and lues gonorrhœa, as applied to this disease, ranging the complications of this disease under the following heads and examining them in detail.

1. Local accidents, namely: lymphangitis, bubo, prostatitis, cystitis, cowperitis, etc.
2. Epididymitis and orchitis.
3. Purulent or contagious ophthalmia.
4. Rheumatism in all its various forms.

The first two classes he disposes of on the *prima facie* proof of their local origin, being due to a propagation of the inflammation by continuity. The third group, that of purulent or contagious ophthalmia, he says is evidently due to an accidental contact of the pus to the eye, and is so little dependent upon a diathesis, that it may show itself as the only symptom upon a person in other respects free from the disease.

M. Pidoux had mentioned cases of gonorrhœa in which there had been cutaneous disturbances, such as acne, sebacea, pityriasis, impetigo, and crustaceous eruptions situated at the commissures of the lips, dependent upon gonorrhœa. M. Fournier declares he has never seen any such which appeared to him due to the gonorrhœa, but think that they were due to a strumous or herpetic diathesis, entirely distinct from blennorrhagia.

The anæmia which is sometimes noticed in the disease is, according to him, due not to any diathesis, but to change in diet and abstinence from all stimulants, nervousness, anxiety, insomnia from painful erections, etc., and to the gastric irritation and disturbance caused by copaiba, cubebs, and the demulcent drinks with which such patients usually deluge their intestinal canal.

As regards rheumatism, he cites the following reasons why that should be denied the privilege of a diathetic origin.

1. Because the large proportion of claps are not followed by rheumatism.

2. Because the diathesis, if such it be, is dependent upon a lesion which is purely local in its nature; which is foreign to others of the so-called diatheses.

3. Diatheses are not prone to be repeated an indefinite number of times upon the same person; while a patient who during his first clap is attacked with rheumatism, is sure to have it again upon subsequent attacks, and vice versa.

4. If this form of rheumatism be owing to a diathesis, it should not be subordinate to individual predispositions, which it is.

And finally, why should it be confined only to urethral blennorrhagia, and to none other, supposing it to be dependent upon a diathesis?

What then is it owing to? His answer is, to a reflex action, dependent upon urethral irritation, and he instances cases in which similar phenomena have supervened upon catheterism.

ART. 17.—*A Collection of Formulæ.*

Demulcent drink in Irritation of Urinary Organs. [L'Union Medicale, January 24, 1867.]

R. Papaveris Caps., oz.vj; Aquæ, Oiss. Boil until the mixture be reduced to oz.vij, filter, and R. Potassæ nitratis, oz.j, and mix. S. oz.ij, twice daily, in an infusion of linseed.

Antiblennorrhagic Bolus. [Ibid., February 26, 1867.]

R. Pulv. Cubebæ, oz.vj; Copaibæ bals., oz.ij; Magnes. calc., q. s., ut fiat xxx. pil. S. 4 to 6 daily during the urethral discharge.

Astringent Injection for Gonorrhœa. [Ibid., March 16, 1867.]

R. Ferri Sulphatis, gr.viiss; Catechu pulv., dr.ss; Aq. rosæ, oz.ij. M. Dissolve the iron in the rose water, add the powdered catechu, and shake. S. In gonorrhœa, four injections daily.

Injection of Copaiba for Gonorrhœa. [Ibid., March 19, 1867.]

R. Copaiba, gr.xv; Ove vitelli, gr.viiss; Aquæ, oz.iv. M. S. Three or four injections daily in gonorrhœa.

Creasote Wash for Mercurial Stomatitis. [Ibid., April 6, 1867.]

R. Inf. Salviæ fol., oz.vj; Creasoti, gr.xv. M. S. Touch the ulcerations of the mouth which occur in mercurial stomatitis.

Antiblennorrhagic Injections. [Ibid., April 23, 1867.]

R. Plumbi acetatis cryst., Cupri acetatis, aa gr.ix; Aceti acidi, gtt.v; Aquæ distillatæ, oz.vj. M. S. Three injections daily.

Pills of Proto-iodide of Mercury. [Ibid., May 9, 1867.]

R. Hydrarg. proto-iodidi, Morphicæ acetatis, aa gr.1-6; Thridace, gr.ss. M. S. Two such pills, twice daily, in secondary syphilis.

Ioduretted Solution. [Ibid., May 25, 1867.]

R. Potassii Iodidi, dr.iv; Aquæ distillatæ, oz.iv. M. S. dr.ij. In tertiary syphilis, and particularly for the affections of the bones. Should the potassium be unpleasant to the taste, it can be masked by adding some teaspoonfuls of rum to the mixture.

Collyrium of Bichloride of Mercury. [Ibid., June 20, 1867.]

R. Hydrarg. Bichlor., gr.iss; Mucilag. sem. croci. sat., dr.j; Aquæ lauro-cerasi, dr.ss; Aquæ rosæ, oz.ij. M. S. Drop into the eyes a few drops, twice daily, in cases of syphilitic ophthalmia with ulcerations of the lids.

Antiblennorrhagic Electuary and Antisyphilitic Gargle. [Ibid., June 27, 1867, July 4, 1867.]

The basis of the first is copaiba; of the second, the bichloride of mercury.

ART. 18.—*Retention of Urine caused by a Stricture seated in the Membranous Portion of the Urethra. Puncture of the Bladder above the Pubes.* [Ibid., April 13, 1867.]

The case is that of a man who had suffered for twenty years from a stricture. At the close of the year 1865,

he was seized with complete retention of urine ; unsuccessful attempts were made to pass instruments, and finally recourse was had to puncture of the bladder above the pubes. In a short time the stream of urine was again established through the urethra, and the opening above the pubes closed. No attempt was made to cure the stricture, owing to the patient's objections.

The patient was seized with a similar attack on the 21st December, 1866, and was seen by Dr. Ségalas on the 23d. The bladder was much distended, reaching up to the umbilicus ; there were violent spasms of the vesical neck, and pain at every attempt made to pass the urine.

After working for some time, a fine gum elastic catheter was passed into the bladder, and a large quantity of urine mixed with muco-pus was passed. This was changed the next day, for a larger one, which was left in the bladder until the 26th, when on withdrawing the catheter, it was found encrusted, and broken off on a level with the eye. The broken portion was left in the urethra. A bulbous pointed catheter was then passed into the bladder, and left in. On withdrawing it the following day, the broken piece of the first catheter was found attached. Gradual dilatation of the stricture was then practised, and at the end of twenty-three days, (reckoning from the time of the retention of the urine), the patient was discharged with the recommendation to pass a bougie from time to time upon himself. The urethra allowed the introduction of a bougie of eight millimetres in diameter.

It should have been stated that the patient had been subject to epileptic attacks which began at the time he had first experienced retention. These were less severe and less frequent than before.

Dr. Ségalas, in his comments upon the case, makes the following statements :

The majority of strictures, not of traumatic origin, are curable. The success of catheterization in such cases depends upon patience, perseverance, and gentle

manipulation, being careful to avoid all force or violence.

It sometimes becomes necessary to resort to stiff bougies, as those of whalebone; the more flexible ones being useless.

Oftentimes it is only necessary to engage the point of the instrument within the stricture to have the urine voided.

The reader finished by saying that owing to the inconvenience which he had often experienced with gum elastic bougies, he had had some made for him, throughout the length of which ran two threads of silver wire, thus obtaining a requisite amount of firmness.

ART. 19.—*Mercurial Poisoning*. [Ibid., April 4, 23, and 25, 1867.]

M. Gailleton, in speaking of the symptoms induced by mercury, prefers the use of the term Stomatitis to Salivation, inasmuch as it is an inflammation of the entire buccal mucous membrane, and not simply increased action of the salivary glands. This may result from inunction as well as from the internal administration of the mineral. Its occurrence and development is rapid. After touching upon the fetid breath, the trembling of the limbs, the papular eruption, the gingival line, etc., which are seen in mercurial intoxication, M. G. calls attention to the fact that patients suffering from this disease are subject to cramps and paralysis of the *extensor* muscles of the forearm; an important point in the differential diagnosis between this and lead poisoning, since, in this latter, the *flexor* muscles are the ones particularly affected.

ART. 20.—*Treatment of Syphilis by the Bichromate of Potash*. [Ibid., May 14, 1867.]

In a paper read before the Société Impériale de Chirurgie, Dr. Leroux advanced the following propositions:

Without wishing to state that this salt is possessed of incontestible antisymphilitic virtues, the author remarked that he had used it in fourteen cases of syphilis, and that in all of them the symptoms had disappeared. There had been some relapse, as is the case in the treatment by mercury. The conditions under which he employed this remedy were, the appearance of secondary manifestations, and absence of anterior treatment. In default of a sufficient number of cases, Dr. Leroux would restrict its use to those cases in which mercury was inadmissible, or to those in which the organism would not tolerate this mineral.

ART. 21.—*Treatment of Syphilis without Mercury.* [Ibid., May 14, 18, 25; June 6, 13, 15, 22; July 2, 1867.]

At several meetings of the Société de Chirurgie the question of the therapeutic value of mercury in syphilis was discussed. MM. Dolbeau and Després were the opponents of this drug, especially the latter named gentleman. The other members of the Society were in favor of the mineral.

The following is a brief summary of the views of M. Després upon this subject. After giving some statistical tables in which some patients had been treated with mercury and others with tonics, etc., he concludes that those treated by tonics recovered more speedily than those who had been treated with mercury. At whatever stage of the disease patients had arrived, those who had taken no mercury were better off than those who had. He considers that mercury debilitates the system as much as does bleeding and low diet. He does not look upon mercury as a specific against syphilis, any more than is quinia a specific against malarial fevers, or opium against delirium tremens. The true method of treatment, he thinks, is by tonics, cod liver oil, iron, and iodide of potassium in small doses.

En résumé, therefore, he believes that mercury, if it does not aggravate syphilis, at least, does not cure it.

The usual way of combining tonics with a mercurial is what makes the use of mercury apparently beneficial, and thanks to the tonic, the mercury gets credit for virtues it never possessed.

M. Depaul answered M. Després' remarks by stating that his statistics were worthless, inasmuch as many of the cases which he considered as cured by the tonic method of treatment had entered other hospitals, with a relapse of their disease, and that, therefore, his deductions were incorrect; calling attention to the beneficial action of mercury when properly given, in the cases of pregnant women suffering with syphilis, and in the cases of children who were born with the disease.

ART. 22.—*Notices of four works on Venereal.* [Ibid., May 28, 1867.]

1. *Traité des Maladies Vénériennes*; par F. F. Clerc, etc.

2. *Leçons Theoriques et Cliniques sur la Syphilides et les Syphilides.* E. Bazin, etc.

3. *Traité des Maladies Vénériennes*; par le Dr. J. Rollet, etc.

4. *Traité Historique et Pratique de la Syphilis*; par le Dr. E. Lancereaux, etc.

M. Clerc in his work considers the origin of the hard and the soft chancre to have been the same, namely, syphilis; an opinion not shared by either Lancereaux or Rollet. Bazin gives four primary lesions, namely: hard and soft chancre, gonorrhœa, and plaques muqueuses, in either of which syphilis may originate. MM. Clerc and Rollet recognize one local primary lesion (syphilitic) that is indurated chancre, to which Lancereaux adds the dry papule. M. Rollet thinks the three diseases, gonorrhœa, soft chancre, and hard chancre are separate, differing in this respect from MM. Clerc and Bazin. M. Lancereaux agrees to the triple division of M. Rollet, but adopts Bazin's views of the history

of these diseases. Clerc, again, interprets their history in a manner entirely different from all the others. Clerc also calls attention to the fact, one previously stated by Ricord, that the indurated chancre is very rarely auto-inoculable, nor can it be inoculated upon any one suffering from syphilis; while the soft chancre is upon all, *no* person being refractory to its influence. He considers the soft chancre which he calls "chancroid," to be derived from the hard kind, and that it is to syphilis what varioloid is to small pox.

Bazin divides his book into three parts: 1, the history of syphilis as a pathological entity; 2, the study of cutaneous syphilides in general; and 3, that of the plaques muqueuses, which he proposes to call "plaques syphilitiques," and other syphilides. Among other things, he admits the existence of a syphilitic blennorrhagia, and states that the most severe syphilitic lesions result from blennorrhagia and soft chancres; lesions which, strange to say, M. Bazin himself considers, as a rule, to be local, and which have no constitutional effects upon the system. He also denies the existence of a syphilitic virus. The principal aim of the book is to show the characteristics of syphilides, and the existing differences between eruptions resulting from scrofula or those of parasitic origin. The author bases his classification upon the natural evolution of the disease, and introduces two varieties not heretofore described, namely, a tuberculo-gangrenous syphilide, and an ulcerated form of acne.

M. Rollet's work is also divided into three parts; blennorrhagia, simple chancre, and syphilis, which he considers as the proper classification of venereal. He, the originator of the mixed chancre, dwells upon its nature and characters, and considers it transmissible in its own kind, a view which can hardly be allowed when the difference in the period of evolution of the two ulcers is borne in mind.

He also treats of the contagious nature of some forms of secondary syphilis, of the commencement of

the disease by a chancre even when produced from secondary forms, of the transmission of syphilis from the nursing to the nurse, etc.

M. Lancereaux's work is a large and very complete one, embracing the six following subjects; the history, nosology, semeiology, etiology, therapeusis, and medico-legal aspect of syphilis. He touches but lightly upon gonorrhœa. The difference between hard and soft chancres are well given, and the separate natures of the two are well laid down.

Our author recognizes in syphilis four periods, namely; 1. period of incubation; 2, period of local eruption, or primary lesion; 3, period of general eruption, that is, secondary manifestations; and 4, that of gummous products, that is, tertiary and subsequent symptoms. Thus, it will be seen, the system is contaminated by the virus before the appearance of the chancre, which our author considers to be the first evidence, or, as he calls it, the period of local eruption of the poisoning.

One other point is worthy of notice. M. Lancereaux admits the *début* of the indurated chancre as a papule, and adds that this papule may never become ulcerated.

ART. 23.—*Old Case of Ulcero-Gangrenous Syphilide complicated with Sycosis.* [Ibid., May 21, 1867.]

Dr. Guibout begins by calling attention to the causes which prevent a ready diagnosis being made in cases of diseases of the skin; 1, the period of their evolution; 2, their old date and long duration; and 3, the complications which may obscure their true nature. He then relates the case of one of his patients who, in addition to a sycosis, was suffering from severe inflammation caused by the abuse of irritant applications. This last was subdued by appropriate treatment, and the ordinary appearances and symptoms of sycosis had been successfully combated, when a tubercular erup-

tion made its appearance, an eruption which was evidently due to a syphilis of long duration, although the patient denied any anterior venereal trouble. M. Hardy saw the patient with Dr. Guibout, and concurred in the diagnosis of syphilis.

The patient was put upon a course of proto-iodide of mercury and iodide of potassium, and at the end of three months was well.

ART. 24.—*Treatment of Syphilis.* [Ibid., June 15, 22; July 4, 6, 1867.]

Dr. E. Poterin de Motel, in discussing the question of the mercurial or expectant methods of treating syphilis, thinks that although syphilitic patients may recover without the use of mercury, it is still no argument in favor of its abandonment, and quotes the cases of other diseases, even virulent ones, which furnish the same facts. As all remedies admit of degrees between entire power and total impotence, so with mercury; and the question becomes not so much whether mercury cures all cases of syphilis, as whether it cures often, rarely, or never; and to reject it because it does not cure all cases, is to deprive the profession of a valuable means of medication, and to expose patients to the risk of dangers which are at times serious, and at all annoying. True it is, that relapses often occur even after a mercurial treatment, but then it must be remembered that mercury does not root out the poison, does not kill it; its action, however, is decidedly to keep under control the manifestations of the disease. In view of all these facts, therefore, Dr. Motel considers a mercurial treatment will be efficacious, according as it is given; and if properly administered, it is curative; palliative only, when given in insufficient doses, for an insufficient length of time, or improperly.

Dr. Bourgoque, in two letters to the *Union Médicale* on this question, argues strongly in favor of a mercurial treatment over an expectant one. He bases his

belief upon an epidemic of syphilis which occurred during the years 1823, 1824, and 1825, in the canton of Condé [Nord]. It was traceable to some children who had been put to nurse, and who at the time appeared to be in good health and free from disease. The nurses were also healthy and free from venereal taint. In from four to six months these unfortunate women were seized with syphilis, and for some time received no treatment, and as the true nature of the disease was not suspected, no physician was called in. The disease spread, and Dr. B. was consulted, who found both children and nurses suffering from syphilis, some in the secondary, others in the tertiary stage. A mercurial treatment was resorted to with success in all the cases but one; this one, a nurse, died of phthisis, which, if not induced by the disease, was at least accelerated by it. He concludes, that notwithstanding all that can be said against the use of mercury, its value is far too great in this disease to admit of its abandonment.

ART. 25.—*On the Treatment of the Primary Lesion of Syphilis.* [Wiener Med. Wochenschrift. 1867. Nos. 43, 44, 46, 53.]

Prof. Sigmund, of Vienna, in a series of papers contributed to the Wiener Medical Wochensch., after discussing the various means of treatment for the primary lesion, arrives at the following conclusions:

1. That when the characteristic primary lesion (indurated chancre) of which sclerosis and the papulæ are only other forms, is once developed, it is a sign that the system has become impregnated with the virus of syphilis; that not only is a local abortive treatment useless, but that a prophylactic treatment is also of no value.

2. That therapeutic means exercise a very slight influence upon the course and result of the disease.

3. But on the other hand, that treatment prevents the multiplication of the disease, not only in auto-inoculation but in transmitting it to others, and that it exercises a favorable local influence upon the primary lesion.

Varia.

OWING to the length of the original communications in this number, and in order that we might give our readers the usual amount of "abstracts," we have been compelled to omit the Reviews and Bibliographical Notices.

DR. MUIR is so well and favorably known in this country that we feel sure many of our readers will be glad to read the following item, from the *Lancet* of May 16.

"Our readers would share with us a feeling of satisfaction at the honor done to Dr. Muir, Inspector-General of Hospitals, in being appointed Honorary Physician to the Queen in the vacancy caused by the death of Sir James Gibson. We have long regarded Dr. Muir as a very meritorious officer, and we watch every recognition of his merit with interest. Some may regret Dr. Muir's removal to his post in India, and may wish that the present popular administration of the Army Medical Department had been strengthened by the presence of Dr. Muir at the Council board. But we scarcely share this feeling. A short period of administrative duty in India will be the crowning experience of a successful inspectorial career at home and abroad, and under the most varied conditions of service. We think it is much to be regretted that honors like that of the K.C.B., so lavishly bestowed upon other military officers, should not be conferred upon such men as the present Director-General, Dr. Muir, Dr. Beatson, and Mr. Mouat."

M. CLAUDE BERNARD, the celebrated physiologist, has just been elected at the French Academy to the seat which the demise of Flourens had left vacant.—*The Lancet*.

A LARGE meeting of the French Medical Association has just taken place in Paris, with the object of designating a certain number of names, which will be pre-

sented to the choice of the Minister of Public Instruction, for filling the Presidential chair of the Association, left vacant by the death of Rayer. The names of Messrs. Tardieu, Larrey, Ricord, Denonvilliers, and Cazeneuve, were successively returned by the voters.—*The Lancet*.

MR. DARWIN has asked the surgeons of St. Mary's Hospital to assist him in the solution of the following questions. No doubt other surgeons will also kindly give the results of their experience and observation on the subject. "When a person screams very violently, and is not suffering conscious pain, as under chloroform, in certain brain-injuries, mania, etc., does the platysma myoides contract strongly, drawing the sides of the cheeks downward, and causing the neck to be transversely wrinkled?"—*British Medical Journal*.

RENEWAL OF PRESCRIPTIONS BY DRUGGISTS.—Various societies in America have now passed resolutions respecting the practice of druggists renewing prescriptions without authority; and the Medical Societies of the City and County of New York have notified the same to the druggists of the city; and the following legal opinion has been given on the subject by Mr. J. D. Harnett, Attorney and Counsellor-at-Law:

"In answer to your inquiry, 'Have physicians a right of property in the prescription given by them to their patients?' I state, first, the prescription is a direction from a physician to some druggist to put up for and prepare for the patient's use, a certain medicine. When the druggist performs this act, and files away the prescription, he has no right to again put up and prepare medicine from that prescription, unless he do so by the orders of the physician who originally gave it. He has no more right to do so, than a merchant would have to deliver, on a written order for one barrel of flour, sundry barrels after the one called for had been delivered. A more important feature is, however, involved in the matter of physicians' prescriptions being

duplicated by a druggist without the physician's authority or instruction, which is, that the medicine so duplicated may be entirely unsuited to the patient's changed condition of health, of which the druggist has no opportunity of knowing. No one is capable of judging in such matters but the attending physician. The druggist who duplicates a physician's prescription without the physician's orders, commits a crime against society, inasmuch as he permits medicine to leave his store which may cause the death of the person to whom it is administered. Second: medical societies have a right (and, indeed, I think it is a duty which they should attend to) to prescribe and establish a rule for the government of druggists in such matters, which, no doubt, druggists would carefully observe. This would save the medical profession from many charges of malpractice, and many persons from the injuries resulting from the continued use of a medicine not advised or prescribed by a physician."—*British Medical Journal*.

THE LANCET thus speaks of Dr. Flint's article on "Alimentation in Disease," in the February number of this Journal.

"Among American physicians there are few who speak with more authority than Dr. Austin Flint. The February number of the New York Medical Journal contains an admirable paper by him on the subject of 'Alimentation in Disease,' read at a recent meeting of the Medical Society of the County of New York. We regret that we can only give an idea of the drift of this paper. Beginning with a eulogium on Chomel's definition of the art and practice of medicine as the application of good sense to the treatment of diseases, he proceeds to a personal vindication of that excellent, if not 'common' quality, and thereafter to his subject. It is painful to think how many errors scientific men would have been kept from if they had given a little more play to their own good sense. On the subject of alimentation Dr. Flint is in practical accord with those

physicians who have lately insisted on the importance of nourishment in the treatment of disease. After briefly summarising the natural history of starvation, he goes on to show that the phenomena of starvation are not confined to cases in which there is a complete deprivation of aliment—in other words, that there are all degrees of innutrition—that degrees of it may be produced in diseased persons as well as in healthy ones, ‘that starvation is sure to occur in cases of disease in a degree proportionate to the lack of material for nutrition in the blood,’ with the same effects and phenomena which attend starvation in persons in previous health. Further, Dr. Flint shows that this starvation may supersede the disease, and kill the patient when the disease itself would not do so, or kill him sooner than if the effects of starvation had not been added to those of disease. Dr. Flint treats of the question of limitations of nourishment. He believes that, excepting perhaps in the early stage of acute disease, there is never any risk of hyper-nutrition, and thinks it ‘always desirable to supply aliment to the fullest extent of the capacity of the organism for appropriation.’ In both acute and chronic disease he recognizes the importance of nourishment. ‘In acute diseases the failure of the vital powers is forestalled in proportion as nutritive supplies are assimilated.’ In chronic diseases, ‘no matter what may be the seat or nature of the chronic affection, a diet fully up to the capacity of the organism for nutrition promotes recovery, if recovery be possible; and if recovery be not possible, by increasing the ability of the system to endure the affection, contributes to prolong life.’ It is, of course, desirable to avoid over-alimentation; but this can easily be done, and, at the worst, the evils of it have been exaggerated. As practical rules for avoiding on the one hand over-alimentation, and on the other disorder of digestive organs, he suggests that alimentation must often be regulated without regard to indications afforded by appetite or taste. He advocates the allowance of a sufficient period

for digestion and for rest, pleasant changes of food, great consideration for the peculiar cravings of patients as representing generally a want of nutrition. He opposes many popular errors on the subject, and speaks happily of the pampered idiosyncrasies of many persons on the subject of diet as a 'strange manifestation of egotism.' We have said enough to show that this paper contains a great amount of wisdom on an important branch of therapeutics, expressed in a happy and aphoristic style. Probably Trübner and Co. could supply our readers with the *Journal* which contains the article, which is one well worth both reading and keeping."

A LOCOMOTIVE STRUCK BY LIGHTNING.—On Friday last, during the hail storm that visited this section, the eastward bound train on the Toledo, Peoria, and Warsaw Railway, George Boies, conductor, and C. A. Martin, engineer, had just left El Paso when the storm struck it. When about a mile and a half east of that city, the lightning struck a telegraph pole. Instead of shattering it and going to the ground, it burst the insulator, making a blaze of light, passed on the wire to the next insulator, and burst that, with another blaze of light, as intense, a looker-on informs us, as a thousand gas jets, and so on for five poles. It then ran down one pole and leaped to the track, and ran back without doing any damage until it struck the engine. It ran up one of the drivers and burst a section of two feet out of the solid tire, and passing along the boiler, without doing any damage, it reached the lever and went upward with a blaze of light similar to that on the telegraph wire, and with a detonation like a small cannon. It looked as if there was an immense lake of fire ahead, into which the train was about to plunge, and the contrast between the light and the ordinary daylight that followed seemed as great as that between the brightest day and the darkest night.—*Peoria (Ill.) Paper.*

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Original Communications.

ART. I.—*On the Import of Symptoms.* By SAMUEL HENRY DICKSON, M.D., LL.D., Prof., etc., Jefferson Medical College, Philadelphia.

THE relation of morbid phenomena to each other and to the special forms of disease in which they manifest themselves, has always appeared to me to be a subject of deep interest, deserving the closest and most earnest inquiry. Pathologists are bound to seek with unwearied diligence and perseverance, the cause and the history of every such change in the vital actions and conditions. The ultimate value of such knowledge cannot be over-estimated; but as yet, and in so far as our attainments have reached, we have been, in a degree at least, disappointed of the expected results.

In the Duke of Argyle's admirable work on "The

Reign of Law," we are warned of the narrow limit set to our capacity, and reminded that the kinds of explanation which we are aiming to arrive at, are different in character and set apart. "That which is made plain to one faculty is not necessarily made plain to another. That which is a complete answer to the question *What*, or to the question *How*, is no answer to the question *Why*. There are some philosophers who tell us that this last is a question which had better never be asked, because it is one to which nature gives no reply. If this be so," he remarks, "it is strange that nature should have given us the faculties which impel us to ask this question, ay, and to ask it more eagerly than any other. It is indeed true that there is a point beyond which we need not ask it, because the answer is inaccessible. But this is equally true of the questions *What* and *How*."

The inference to be drawn from these well-considered reflections, is clearly that we must never cease to inquire, to ask, to explore. Only by the most persistent effort can we ascertain, if even thus, that we have reached the limits of the knowable in any direction. The philosophical physician, guided by these views, will refuse to regard diseases as mere "bundles of symptoms;" he will not be content to recognize merely their coincident presence; he will strive to detect the bond of connection which unites them, and to comprehend how and why they produce and depend on one another. He will be anxious to know both their relative and absolute value. He observes that a particular mode of suffering, headache for example, is associated

generally with fever ; he finds it often connected with a local hyperæmia, congestive or inflammatory, but he soon discovers that this connection is not constant ; and thus he is led to ask why it should occur in the individual case before him ; or, reversing the problem, why it should not occur uniformly under contingencies apparently the same or similar.

Knowledge, such as is here implied, will not surely be long barren, but when we acquire it must abound with rich fruits. Symptoms will then be ever pregnant with meaning. They will teach us not only the existence and degree of intensity of morbid conditions, but will suggest to us their hidden nature and origin ; and this apprehension of causes will not fail to lead us to the therapeutical arrest of consequences and effects.

At the present day, it must be confessed, we are sadly deficient in this department of our science. We deal habitually with symptoms as mere entities, sometimes associated, sometimes absolutely isolated. Of their roots we often know nothing and are too apt to be content to know nothing. We appreciate them individually, as we see them associated or concurrent with other symptoms, and then arrange them as parts of or belonging to certain diseases ; but so loosely that we scarcely miss them when they do not attend, nor do we even allow their absence to suggest a question as to the character of the cases. We occasionally make an endeavor to separate and distinguish them as incidental or characteristic, uniform or uncertain, prognostic and diagnostic. But we decline to investigate, or we neglect to overlook their real significance, their relevancy,

so to speak, to the underlying changes, the *causes* of which they are the out-cropping, superficial *effects*.

"Time is lost," says Theophilus Thompson, "in the laborious accumulation of miscellaneous facts. Numerism is productive in proportion to the intellectual intuition applied in the selection and appreciation of facts. There is an aristocracy of facts as well as of races, and the mind should be taught to discern their prerogative dignity. He who cannot or will not see that one fact is often worth a thousand as including them all within itself, and that it first makes all the other facts; who has not the head to comprehend, the soul to reverence a central observation or experiment, what the Greeks would have called a proto-phenomenon, will never receive an auspicious response from the oracle of nature."

And Latham, following the same track of thought, argues, "There is nothing that we call symptom in disease which does not contain within itself much more than a mere sign; as dawn, a sign of the rising sun, is the effect of his beams; cloud above us, a sign of rain, is an actual gathering of the waters. Symptoms flow out of disease, being signs of something behind and beyond."

From our ignorance or carelessness in this matter, arise obvious difficulties in our nosology and methods of classification; hence also modes of treating of disease absolutely paradoxical, as when we speak of fever without heat of skin, of small pox without exanthem, and of cholera without discharges or spasm. We thus loosely acknowledge that we have not settled upon any

indispensable symptom which shall be taken as the true, unfailing, and exclusive manifestation of the definite pathological condition. We regard an individual subject as an epileptic, because he *has had* convulsions; and we expect, though we cannot tell why diagnostically, that he will be again attacked. If he is not, we can no more explain his escape than his previous seizure.

In the Typhic group of fevers, we recognize two, perhaps three varieties or "types," which we separate clearly enough. Each of these is marked by a characteristic eruption on which no little stress is laid. In true typhus, there are maculæ, dark and fixed, probably a deposit of pigment in the skin. In typhoid, a rose-colored erythema shows itself in defined circular spots, transient and in successive crops, a mere passing and local hyperæmia of small dermal vessels. In spotted fever, obscurely and capriciously combined (but what is *not* obscure in *its* history?) with a frequent yet not uniform cerebro-spinal meningitis, we have cuticular stains, blotches, petechiæ, and ecchymoses more or less diffused, varying in character, some of them slight erythema, some apparently pigmentary, and some truly hæmorrhagic.

Now, whatever else may be said of these cutaneous phenomena, whatever importance may be attached to them as prognostic or diagnostic, nothing even plausible enough to invite discussion has been offered in explanation of their presence, no reason given for their occurrence, no suggestion of the nature of their connection with the other symptoms with which they are

concurrent or coincident, nor any conjecture of their meaning or purport.

Some have ventured to hint that they are exanthematous; but in the true exanthemata the cutaneous eruption is not only uniform and diagnostic, but it is somehow essential; it cannot be dispensed with; it must take place in a regular and consistent way; must go through its successive stages; if it be interfered with in its established progress, if it subside unduly, disappear, abort abruptly, "strike in," as the phrase is, the most serious consequences, as is well known, will follow, full of risk and evil.

But in the fevers of which we speak, the affection of the surface plays a very small and unimportant part. Spotted fever may exist with few or no spots; the patient dying with or without tetanus, with or without blood-stains, with or without meningitis. Typhus may always present its peculiar maculæ, but they are little considered either as diagnostic or prognostic; they cannot be seen in the negro, and indeed we do not care much to look for them, as their quantity indicates nothing which it is of consequence to us to know.

A very different view, however, is taken by many modern writers, of the eruption in typhoid fever. Aitken says: "The successive daily eruption of a few small, very slightly elevated, rose-colored spots, disappearing on pressure, each spot continuing visible for three or four days only, is peculiar to and absolutely diagnostic of typhoid fever." To make this dogma more emphatic, it is printed all in capitals. It is followed, however, by the statement that "the eruption is

often so scanty that the physician may justly hesitate for a day or two to make a diagnosis ;” and on the next page we find a conditional phrase which entirely destroys the force of his definition. “The eruption already described, and sudamina, are *nearly constant* in children after five years of age.” “In children between one and five years of age the phenomena do not seem to be so easily observed as in adults.” A symptom just stated to be “absolutely diagnostic,” one “which clenches the diagnosis,” is *nearly*, that is, not altogether, “*constant* in children after five years of age,” and “not so easily observed in infants:” it is difficult to perceive why not ; their skin is clear and delicate.

It is so hard to prove a negative that I will not contend for the possibility of a typhoid fever independent of the *tâches rouges*. But they are “often scanty,” perhaps “not constant,” undiscoverable in the negro, in whom we must diagnosticate the case without them. Sutton, in a good history of Epidemic of Typhoid in Kentucky, declares them to have been generally wanting ; no one has drawn any inferences prognostically from their absence or presence, abundance or sparseness. All that we know about them is that if from the sixth to the ninth day of a typhic fever, we find them on the body, we feel justified in giving name to an attack concerning which we may have previously doubted ; we conclude further that diarrhœa impends, and meteorism, and bulging and ulceration of Peyer’s patches, with risk of destruction of the patient by perforation through the coats of the intestine and the peritoneal serous tissue. But these are to us facts of

simple coincidence; coming to us empirically by tradition and recorded experience. We have no guess at their connection with or relation to each other, nor at any condition serving as common cause to them all.

In the varied modes of death in these, and indeed in all fevers, widely considered, we are annoyed with further illustrations of the same profound ignorance. Our prognosis may be sagacious enough and generally correct; we may foretell the death, but too often we know not how or why it ensues. If it occurs early, we seldom find any thing to explain its necessity. We talk of congestion, and of toxæmia; but we know not why in certain cases the familiar congestion, so usually transient, should persist fatally. Nor have we detected the blood-poisons, though sought for with the highest powers of the microscope and the most delicate chemical analysis. Of consequence we know literally nothing of the relation of the symptoms with the ultimate catastrophe.

When a death occurs from protracted fever, the usual lesions found are inflammatory or quasi-inflammatory. Does this prove the identity of fevers with the phlegmasia? Even if this were so, the nature and extent of such inflammatory lesions do not explain the death. Mere ulceration of the patches of Peyer heals in the majority of cases; it is only when it perforates into the peritoneum or a large vessel that we understand the result to have been of necessity fatal, as from hemorrhage in the latter case, in the former from nervous shock, perturbation, and prostration, for the patient dies far too promptly to allow any other explanation.

In typhus the local lesions, it is conceded, do not account for the death.

We ask in vain why the black vomit of yellow fever is so terrible a portent of evil. If it be a hæmorrhage, as is so generally believed, surely the amount of blood lost in the majority of cases is not sufficient to destroy the subject. If it be a morbid secretion or excretion, its specific cause and mode of origin are most obscurely hidden, and the energy of that cause strangely capricious, for the result does not in any degree depend upon the quantity poured out, some patients recovering after profuse ejections of this sort, others dying with little or none. And what means the deep orange hue of the skin and eyes, met with so frequently as to give name to the disease, and yet not seldom wanting or scarcely observable either in the moribund or the convalescent? The characteristic fatty liver too, the *café au lait* or box-wood atrophy, so rapidly developed, whence does it arise; what is its relevancy to the other conditions? Riddell tells us that a similar or analogous fatty degeneracy of the heart is even more uniformly present; if so, it is hard to say what is its origin or tendency, or how it appears in this combination.

But in truth, as we know little of the nature of life, we understand little or nothing of its extinction. Professor Casper, of Berlin, a thorough expert in the autopsies of his Professorship of Medical Jurisprudence, tells us that "Cases very frequently occur in which the most careful examination of the body can discern no material alteration that has any reference to the cause of the death of the individual. Cases of this

kind can, as I have often seen, terribly perplex the inexperienced. Nothing abnormal in the surface of the body, nothing in the cranial cavity, nothing in the thorax, nothing in the abdomen. Of what did the deceased die?" (*For. Med.*, vol. i, p. 56.) Elsewhere he says, (p. 59,) "In neuromyolytic death, not only is the mechanism of the body in no way altered, but there is also no perceptible change in its fluids or solids. It is of frequent occurrence," etc. We must accept unequivocally the conclusion he arrives at; that "the cause of death cannot with certainty be determined; this decision is in itself perfectly indisputable."

We boast, and with some justice, of the hygienic progress of civilization to which our profession has so largely contributed. Knowledge of causation is valuable as suggestive of prevention; but it is humiliating to reflect how little we know of, or knowing, how little we can do to counteract the causes of our endemics and our epidemics, more or less pestilential. Nay, with regard to attacks of pestilence continually occurring among us, sporadic or individual, how total our blindness! It is but the other day that two deaths occurred in this city under circumstances deeply impressive, from what we call indifferently spotted fever or cerebro-spinal meningitis. Two young men, members of the medical class of one of our colleges, having reached the termination of the session in good health, one of them having passed honorably through his examinations and waiting for his degree, both of them of good standing and well esteemed, of temperate and regular habits, residing not in the same house, but in the same street

three squares apart, following the same pursuits, but in no way associated together, were, within a few hours of each other, after no special exposure of any kind in either instance, under no discoverable excitement or annoyance, no ascertainable change or alteration of conditions, no undue or unaccustomed contingency, attacked suddenly, harshly, violently, and fatally. One of them lingered from Monday night, when he had a chill, until Thursday forenoon; the other sank within forty-eight hours from the moment of seizure. Both of them were fine specimens of youthful vigor, the second especially was tall, manly, robust, strong, and active. The first was what is designated as a tetanoid case, yet not without abundant spots on the surface; the second was covered with purpurous blotches and ecchymoses, but did not suffer from spasm. There was no autopsy obtained. Now and then, for months past, the bills of mortality of the city would contain the notice of a death from this terrible disease, but for two weeks previous there had been no such record. The street is pleasant and well kept, the neighborhood healthy, both houses in good hygienic state, neat and clean, and the numerous residents in both of them free from every form of sickness or complaint.

In vain we endeavor to detect the source and nature of a poison so insidious, so rapid, so deadly; in vain we ask what determined its assault upon these two apparently firm and choice constitutions, or what lurking predispositions to special evil could be masked under such deceptive tokens of perfect health. Alas! of how little avail, how little instructive import, how little

prophylactic importance, are the contingencies we are accustomed to dilate upon as of such high value, in our disquisitions concerning hygiene, when we find that under the most favorable circumstances of civilized and refined life, an obscure pestilence of the most incalculable and irresistible intensity can thus be generated among us, and select its victims by affinities which seem to contradict and run directly counter to all rational and preconceived anticipations.

Much stress has of late been laid upon the disappearance of the chlorides from the urine during the progress of pneumonia, and their return when convalescence is established. We are not clearly informed why nor where they are detained. They have not been detected in the inflamed parts where Williams says they are arrested, nor is it known that they disappear from the renal secretion in any other of the phlegmasiæ. It is not shown that they come away with the sputa where there is expectoration, nor what becomes of them in cases, occasionally met with, where there is none. Their restoration seems to attend or follow recovery of health, but neither to predict, nor denote, nor conduce to it in any sense.

The same may be said of the herpetic eruption which, occurring about the mouth, Todd regards as of favorable purport in pneumonia, and which some physicians and all nurses look upon as pleasantly prognostic in fevers generally; no one has even conjectured how or why.

A special form of disease is now recognized as "Addison's, or bronzed skin," of which the melainic or

darkened color of the surface is considered to be the *sign*, whether *effect* or not, of a peculiar degeneration of the renal capsules. But many authorities, Virchow, himself a host, among them, deny the uniformity of the connection, and affirm that cases of varied degeneracy are met without the bronzing, and cases of bronzing where the capsules are found quite healthy.

Convulsion stands prominent as one of the most appalling of morbid phenomena. The hideous disfigurement of the "human face divine," the rapid contortion of the features and the grotesque grimaces, the rolling eye, the frequent strabismus, the gaping and shutting jaws, the protruded and wounded tongue, the bloody foam on the turgid lips, the twisted neck, the empurpled visage, the frame agitated with muscular contractions, clenching of the fists, bending and extension of the limbs, constitute a picture from which we shrink instinctively with pity and dismay. But what is the import, the meaning of this terrible display? I have gone through the painful details that I may impress on my reader's mind our total want of comprehension of the entire pathology of the case. It is not needed that I should remind him that these symptoms attend upon a prodigious variety of conditions of body and mind, and are not essentially dependent on or connected with any one. "Epilepsy, as is well known," says Nannias, (Bouchardat, *Annuaire*, 1868, p. 196,) "has sometimes its source in incurable material lesions. But it may happen that these lesions shall persist, and the fits disappear, so that we are forced to admit the intervention of another unknown element, upon which de-

pend the appearance or disappearance of the epilepsy." Brown Séquard had indeed anticipated this view when he formed the abstract ontological idea of epilepsy, which, being present, his guinea pigs might be excited into a fit, but when it went away were no longer excitable.

In our crude "bills of mortality" there is always found high up on the list, as far as numbers are concerned, the category of "convulsions." Now, nothing can be clearer than that this use of the term is a deplorable mistake, a grievous fault in our nomenclature, and one that should be corrected without delay. Convulsion is not in any sense a disease. It is a mere symptom which occurs more or less frequently in the progress of every known form of disease. It is not uniformly associated with any, if we except puerperal eclampsia. It must not be confounded with spasm—tonic or persistent contraction of contractile tissue—which constitutes, as we believe, the very essence of many diseases. Spasm is a frequent cause of death, but never appears, by name, on our bills of mortality. Convulsion cannot properly be said to cause death in any case, yet occupies a large space in them. Several forms of convulsion are physiological, and functionally available for useful purposes; as coughing, sneezing, vomiting. Spasm is invariably morbid and injurious. Convulsion is rarely if ever attended with pain, unless by undue protraction or peculiar violence; nay, it is sometimes pleasurable, as in laughing, and intensely so in venery. Spasm is always painful, the slightest cramp of a muscular fibre is hard to bear.

Convulsions often usher in attacks of disease, as of the exanthemata, pneumonia, etc., in children; the familiar chill of fever in adults as well is a mode of convulsion. They follow a fright, violent emotion, sudden shock; the irritation of worms in the intestines, of teeth in the gum, of sesamoid bones in the toe, may produce them, or a bit of glass imbedded in a nerve, a cut across the spinal cord, as in Brown Séquard's guinea pigs, or a tumor in the brain, the vertebral column, the liver. Sympathy and imitation alone will capriciously excite them, and if we reason with Todd, they "eliminate by salutary explosion" certain poisons from the blood in some inconceivable way, as in cases of uræmia. I might go on to enumerate indefinitely additional occasions of their occurrence, as in the hysteric and pregnant woman, nervous, emotional, and mesmeric disturbances, but these shall suffice.

Let us demand then, and most earnestly contend for the rejection of this heading from all municipal and general obituary records. I maintain that convulsion is not only not a disease, but it is not an essential portion of any disease, with the single and not perfectly clear exception above allowed, either characteristically or diagnostically. If the assertion of such essentiality be plausible in any instance, it would surely be so in epilepsy. But epilepsy is familiarly and by common consent divisible and divided under two heads, the characteristic condition underlying both of them equally and alike. One of them, known, I regret to say, by no English designation, but spoken of in French phrase as "*le petit mal*," exhibits no muscular agitation what-

ever. A lady riding does not fall from her saddle nor lose her bridle rein when attacked. Momentary vertigo, "vertige epileptique," a brief instant of mental inanity, vacuity, loss of consciousness, suspension of volition, of thought, this is all; there is nothing more recognizable either objectively or subjectively. Between the paroxysms, whether thus simply vertiginous or truly convulsive, we cannot consider the subject—how reasonably imagined in ancient times to be under demoniac possession!—we cannot regard him as free from disease. Yet what shall we say of its nature, its specific character, except that it is absolutely unknown? We have not detected the relation which it holds to any one among the numerous conditions with which we find convulsion to be familiarly associated.

There is another complicated question rapidly coming to press upon us as we acquire valuable accessions of knowledge from the kindred sciences. The microscope shows us every day new objects of investigation, entities, animal and vegetable, developed in diseased tissues, and in morbid secretions and excretions. Of some of these we know nothing except in this connection, we find them nowhere but in sick bodies. Others are found outside of the organism, into which they intrude themselves, and are detected by the mischief with which their presence is attended.

It is not always clear whether their development and growth are to be looked on as causative of the contingencies in which they make their appearance, or rather the effect or product of those contingencies, or perhaps, in fact, as mere coincidents, like certain other phe-

nomena to which reference is made above. Parasites attached to the living body, both entozoa and ectozoa, have been maintained to be altogether indifferent, innoxious, entirely consistent with good health; nay, Rush contended that worms in the human intestines played a useful part as scavengers. The various "grubs," as Wilson calls them, his entozoa folliculorum and acari, and the several pediculi, whatever annoyance they may occasion, do not usually disturb the general system in any material degree. Nay, the trichina spiralis itself, recently noted so gloomily in our medical records, is now and then met with, as I have seen it, in the healthy muscles of a body accidentally killed, and displayed in our dissection rooms.

But there are unnumbered tribes of vegetable and animalcular beings detected in the fluids and upon the tissues, which are alleged to be specific by histologists, and must at least be considered characteristic. Their absolute exclusiveness of appropriation is not yet made out satisfactorily. M. Simon is said to have "announced at a late meeting of the Pathological Society of London, for Dr. Hallier, of Jena, that he had in the course of recent and very extensive investigations, discovered characteristic fungi in variola, variola ovinia, vaccinia, and in the blood in typhus, typhoid, and measles." Professor Salisbury ascribes intermittent fever to a palmella, and measles to an alga, and has detected characteristic fungi in syphilis and gonorrhœa. An ingenious paper from his hand in a late (April, 1868,) number of the American Journal of Medical Sciences, gives us the history and portraits of a penicillium, some

toruli, several zymotoses, a botrytus, and a crypta, fungous parasites, and of animalculæ, a ciliaris, a trichina, a sarcina, and a trichomonas, all from the genito-urinary organs. The oidion and the leptothryx infesting the pseudo-plasm of diphtheria, the algæ in muguet, in favus and porrigo—and I might adduce scores of other examples—have been subjects of dispute as to their relation to the morbidities always observed where they have been detected. Even in the halitus of pertussis, Poulet has found “a world of minute infusoria which were in all cases identical,” the most numerous being bacteria, and a monas.

Still more obscure, if deeper obscurity be possible, are the relations of such morbid formations as tubercle and the cancer cell to the organisms which they seem to inqurate. Vogel speaks of them as “individual,” or rather “semi-individual,” and there can be little doubt that they possess the property not only of taking root in a healthy part or tissue, and growing there, but besides and beyond this, they originate in that system, previously sound, a series of perverted actions which result in the formation and deposition of similar injurious pseudo-plasms, malignant cells and tumors in other parts.

Here then a wide field of controversy, doubt, and conjecture is opened to us. What is the true and available import of these discovered facts? Parasitic and quasi-parasitic diseases are communicable, and seem to be conveyed by means of the transfer of the palpable parasite, whether animal or vegetable, which migrates either spontaneously or with our help, and may be

ingrafted. Such certainly is the fact with many or most of them, but we cannot venture, in the present state of knowledge, to affirm that it is true of all. With one remarkable exception, and some others imperfectly known and little considered, the diseases enumerated as of parasitic character and combination are among the contagious. But we are hardly prepared to say that the parasite is the *materies morbi*, the element of contagion, which is assumed indeed to be a poison or malignant force that in no distinct case we have ever detected as yet and separated. It will be very difficult to prove it to be the *fons et origo mali*; nay, in many instances it seems greatly more probable that we find it where it is, because the morbid surroundings afford it an appropriate *nidus* and *pabulum*.

The exception above alluded to is worthy of especial consideration. If the observations of Professor Salisbury upon intermittent fever be established as correct and well founded, we have a familiar malady parasitic but certainly not contagious; no one imagines the possibility of communication of malarial ague from a sick to a healthy man.

Yet it is not easy to conceive the existence of a parasitic alga or fungus, which shall bid defiance by its tenacity of life to so many perpetually recurring changes within the animal body for such indefinite periods of time, through so many alternations of season and climate, shall be capable of most abundant reproduction or multiplication within the organism, and such ready elimination with the several excretions, and still when passing out or ejected in notable amount, shall

be totally incapable of finding its way into and impressing other animal bodies in its neighborhood.

And again, if these minute existences are not, all of them, like the palmella, intruders from without, how do they originate? Is Virchow right in his cell-pathology, maintaining that they are natural elements, cells of course, somewhat altered and modified merely by circumstances; or, as Paget and common sense teach us, new productions, altogether different from healthy material, and of essentially perverted and evil character? But if we press this inquiry we shall scarcely be able to refrain from intrenching upon the great biological controversy, now so hotly carried on by Pasteur and Donnè, and so many other renowned microscopists and histologists, concerning the mysteries of a disputed heterogenesis or "spontaneous" or "equivocal generation," in which, reluctant to engage, I decline to involve myself, and therefore close here somewhat abruptly this imperfect essay.

ART. II.—*Notes on the Diagnosis of Injuries of the Hip.*

By JOHN H. PACKARD, M.D., one of the Surgeons to the Episcopal Hospital, Philadelphia.

PERHAPS there are few points in which practical surgeons would more generally agree than in admitting the great difficulty of diagnosis which may be met with in injuries of the hip, and in fact in the neighborhood of most joints. The obscurity is rendered somewhat greater in the hip than elsewhere, from the depth and limited extent of the joint, the bulk of the

soft parts surrounding it, and the complex shape of the femur. The object of the present paper is to discuss the value of the diagnostic signs which we possess in these cases; a value to be determined by their constancy, their reliability, and the ease with which they may be recognized.

There are four periods at which a surgeon may be called upon to form an opinion in a case of this kind: 1, directly after the receipt of the injury; 2, when time enough has gone by for swelling to take place, perhaps with other phenomena of inflammation; 3, after these symptoms have all passed away, and the part is either convalescent, or has resumed as far as possible its normal state; 4, in post-mortem examination of the bone, perhaps long after the injury.

At either of the first three of these periods, or in other words, during the life of the patient, we have the advantage, almost always, of a more or less full and accurate history of the case. Sometimes we have such knowledge in regard to prepared specimens of the bone or bones concerned, but it is quite as apt to be wanting. The earlier the period, the more completely are we able to separate the effects of disease from those of violence; since in cases of old injury, even if the patient were previous to the accident in perfect health, yet disease may have been set up in consequence of the hurt, and complicate the pathological conditions beyond unravelling. For example, a mere contusion may be the exciting cause of chronic rheumatic arthritis, and this may lead to partial luxation, with great alteration in the lip of the acetabulum, as well as in the neck and

head of the femur, so as to simulate more or less closely fractures of these parts. In old bones, and especially in those without histories, there is rather a wide range of possibilities, since the distinction may be very slightly marked between the changes induced by disease and those which are dependent upon fracture, after the latter have been rounded off and smoothed down by the so-called modelling process.

During life, the question lies between dislocations of the femur on the pelvis, fractures of the acetabulum, fractures of the neck within the limit of the synovial membrane or outside of it, and mere contusions of the hip; all these being sometimes complicated by chronic rheumatic arthritis or by the simpler forms of rheumatic disease, as well as by senile changes. Usually, in the dried specimen, the diagnosis has to be made between the results of mere contusion or of senile change, and intra- or extra-capsular fracture.

Mistakes may be made in these cases at any of the four periods before mentioned.

CASE I.—About thirteen years ago it happened to me to see a man who had fallen from a hay wagon and received a very severe injury of the right hip; he was repeatedly and carefully examined by several experienced and competent surgeons, who decided that he had sustained a fracture of the neck of the thigh bone. He was treated upon this view, with extension by means of Desault's long splint; phlegmonous erysipelas and very grave constitutional symptoms were successfully combated, and eventually he recovered, but it was then clear that the nature of the primary lesion had

been mistaken. The head of the femur was dislocated upon the dorsum ilii, and the man was lamed for life.

CASE II.—In 1863, I was asked to see a child about a year old, who had about a month before slipped off a step on which she was sitting, and hurt her hip. There was loss of power, undue prominence of the trochanter, and flattening of the buttock, but no other decided symptoms, and I withheld my opinion until I should see the case again. Before my next visit the parents took her to another surgeon, a gentleman of merited repute, who said it was a luxation, and claimed to have reduced it. My supposed mistake mortified me not a little, but a few months afterward I was again called in, and found the case to be one of atrophy of the muscles of the part, with dragging of the leg, from congenital malformation.

The difficulty of diagnosis even in dried specimens is well illustrated in the case of the celebrated comedian, Mr. Charles Matthews, who, in 1826, was thrown from his gig, and after twelve months' confinement to a sofa, still continued lame to the end of his life. Mr. Snow Harris, in 1836, exhibited the upper end of the femur of this gentleman to the British Association, as a specimen of intracapsular fracture united by bone. "He had found the trochanter higher up than natural, and the neck of the bone shortened; a section of the bone had been made, and the line of union, in Mr. Harris's opinion, was clearly manifest." Upon careful examination and discussion, it was decided, with Mr. Harris's concurrence, that there had been no fracture, but

that the case had been one of chronic rheumatic arthritis.*

Within a year the opportunity has been afforded me of examining three specimens which had long been regarded as intracapsular fractures of the cervix femoris, with bony union. Upon section, however, two of them were found to present no fracture at all, the deformity being the result either of disease or senile change, while the third was a typical specimen of impacted extracapsular fracture.

Undoubtedly, there are cases in which the diagnosis is easy; as for example, where the surgeon is called to an old person who, previously well, has tripped or fallen, and finds him lying with the foot everted and the limb decidedly shortened, the line of the thigh straight. From a case like this to one in which the foot is very little changed in position, or inverted, the shortening doubtful, and all the other signs extremely obscure, there are numberless grades of difficulty.

It seems to me that in many cases we do not sufficiently consider the danger, although it is mentioned by all writers, of insisting too much upon setting our doubts at rest. A diagnosis is dearly bought at the expense of further violence to parts already injured; and it would be far better surgery to abstain from pushing an inquiry which after all cannot materially influence our treatment. These remarks of course apply only to cases where luxation can be excluded, although in the very aged or infirm, or when there are

* Cyclopædia of Anatomy and Physiology, Art. "Abnormal Conditions of the Hip Joint.

other severe injuries, even this may be of but secondary importance, since the shock to the system at large may preclude any effort at reduction.

The general rule may be laid down, that in injuries of the hip the first point to be settled is this very question of luxation. And although we know that this lesion is less apt to occur after the middle period of life, the fact that Hamilton found, among eighty-four recorded cases, eight in persons between forty-five and eighty-five, and that a case is quoted from Gauthier by Malgaigne, in a woman of eighty-six, should put us on our guard against assuming that the case of an aged person cannot be of this character.

When a definite history can be obtained of the accident, and the violence is proved to have been applied close to the joint, the probability of luxation is diminished; since the leverage afforded by the shaft of the bone, to a force acting at the knee, aids very much in the lifting of the head out of the socket.

CONDITION OF THE MUSCLES SURROUNDING THE JOINT.

Much stress has been laid, and justly, upon the lump formed by the head of the femur in its abnormal position when luxated. The complement of this sign—the void space beneath the muscles—has been too much neglected. For example, in dislocation on the dorsum ilii the sartorius and rectus femoris are relaxed, and the fingers can be pushed into the hollow beneath them. So also in dislocation forward on the pubis, the glutei are relaxed and flabby, and a depression is felt at the lower part of the buttock, which is narrowed. This neglect

is the more singular, inasmuch as analogous deformities are so very important as diagnostic marks of luxation in the shoulder, elbow, and ankle. The sign in question would be most readily perceived in thin and long-boned persons, and loses much of its value after swelling has occurred. Taken in connection with the limitation of certain motions of the joint, the patient being under the influence of an anæsthetic, it might even serve to prove the existence of luxation, when all the other symptoms were obscure.

Crepitus, when clearly made out, of course proves the existence of fracture, and hence it is apt to be too urgently sought for, in order to set the doubts of the surgeon at rest. It is in this way especially, I believe, that injury is done in these cases by rough handling. Perhaps it is too much to say that we often see, but surely we have all of us seen, every member of a consultation strive in turn to elicit the sound for himself, with a satisfaction not shared by the patient. The fact of its existence, once established, may almost be said to set aside the idea of luxation. One case only is known to me in which a fall, having been complicated with a crushing force, the neck of the bone was fractured and its head displaced. But if the fracture concerns the acetabulum only, the head of the femur may slip out, carrying the fragment before it. In such a state of things reduction is easy, but the displacement as readily recurs. Here there will probably be some position of the thigh, adduction, abduction, flexion, or extension, in which on passive rotation the neck of the bone is felt to be the radius of the arc described by the

trochanter. Moreover, there will be some position in which luxation, usually but partial, can be detected. Maisonneuve* reports a very instructive case of this kind. I saw one singularly parallel to it in 1866, at St. Joseph's Hospital, in this city. The crepitation here, as in all cases where one of the fragments is very slightly confined by the surrounding parts, is apt to be of a loose and rattling character, quite different from the grating sound of fractures through cancellous tissue, or the click of most fractures of the shafts of bones. On the other hand, the absence of crepitus does not exclude fracture, since firm impaction, or complete separation of the broken ends may prevent its being felt. The latter state of things is the more common. Mr. T. Carr Jackson† relates a case in point:

A very feeble and spare woman, aged over 70, was admitted into the Great Northern Hospital with an injury of the hip, having been hustled and thrown down by some boys. There was marked shortening of the limb and complete aversion, but no surface bruising. *Crepitation could not be detected*, and the power of raising the limb remained. She died of exhaustion two weeks afterward. "The osseous structure was of a light and friable character, and at the seat of fracture was imperfectly comminuted, some small fragments being detached at its margins. *No laceration of the capsular ligament existed, and the line of fracture was directly transverse and close to the articular cartilage on the head of the bone, which remained in the acetabulum.* The neck

* Clinique Chirurgicale, tome i, pp. 166.

† Trans. of London Path. Society, vol. xviii, pp. 219.

of the bone had evidently been altered in direction and shortened from atrophy, so that there was little appearance of the ordinary outline of the neck when the fractured surfaces were placed in apposition."

In Mr. Stanley's singular case,* claimed as one of bony union of an intracapsular fracture, crepitus must have been wanting, since the injury was at first supposed to be a luxation of the head of the bone into the thyroid foramen, and efforts were made at reduction.

Of course there could be no crepitus in partial fractures of the neck, such as the one described by Dr. J. B. S. Jackson, in 1856.†

In fractures of the cervix external to the capsule, there is very apt to be detachment of the greater trochanter; according to Prof. R. W. Smith, of Dublin, this always happens. Were it invariable, we should have a valuable diagnostic sign of this form of fracture, in the crepitus elicited by slight to-and-fro movement of the broken piece. As it is, the absence of such a symptom is not conclusive of intracapsular fracture; but its presence puts the existence of extracapsular fracture beyond a doubt.

Pain. Not only is the actual amount of pain suffered by different individuals with the same lesion very different, but one will complain much more than another, so that it is particularly hard to estimate the value of this symptom. Moreover, we must take into account the fact that the degree of injury of the soft

* Med. Chir. Transactions, vol. xviii, 1833.

† Transactions of Boston, Soc. for Med. Improvement, Sept. 1856. p. 36. Also Hay's Journal, April, 1857, p. 306.

parts is very variable; and this, not only from the character of the force applied, but also from the form of the breakage. Sometimes there will be a great amount of contusion and laceration from the violence of a fall, or by reason of the especial conformation of the bone, its fracture will be jagged and irregular. On the other hand, some old and feeble persons will, from a very slight fall, or even from a twist of the foot, sustain a fracture almost evenly across the neck of the bone. In some old persons, again, it seems as if the decay of nature had already blunted the sensitiveness of the nervous system, so that after an injury of any kind the suffering is rather from shock than from actual pain.

Whether for these reasons, or from incidental differences in the cases observed, the statements of authors do not agree on this point. Sir A. Cooper, thought that the pain in extracapsular fracture was much greater than in intracapsular. In this opinion he is joined by Hamilton and Erichsen, but directly opposed by Malgaigne. Prof. R. W. Smith, of Dublin, does not discuss the question at all.

My own belief is, that no reliable inference can be drawn from the degree of pain complained of. We not unfrequently see cases, the subsequent course of which indicates mere contusion, in which the suffering is very great. In others, the patients seem comfortable except when passive motion of the limb is made, and yet the *post mortem* dissection reveals extracapsular fracture.

Shortening. This is a symptom in regard to which a much greater degree of accuracy is possible, than is often

attained by observers. No measurement can be relied upon which is not made with the patient lying flat on his back, on an even surface, and with the lower extremities in exactly the same relation to the pelvis. Sir Astley Cooper mentions a case in which the shortening, only one inch and half in the recumbent posture, was increased to two inches and a half by the elevation of the pelvis on the injured side, when the patient stood up.

After recovery has taken place from a fracture anywhere in the lower extremity, where there is known to be some degree of shortening, the surgeon may be surprised, on making the patient stand up, to find that it seems as if both limbs were of the same length. Here exactly the opposite of what was first mentioned takes place. The patient drops his pelvis on the injured side, so as to lower the foot to the ground. From this inaccurate mode of estimating the shortening, many results have been claimed as perfect, which in reality were not so.

If, now, in case of a recent injury a careful measurement is made, from the anterior superior iliac spine, past the inner edge of the patella, to the tip of the corresponding malleolus, what are we to learn from it? If there is absolutely no shortening, fracture is almost, and dislocation altogether, ruled out; provided, that there is not the very rare deformity which attends luxation into the thyroid foramen, in which case other symptoms would be of more consequence than that in question, and would imperatively claim attention.

Very often the shortening, only slightly marked at

first, increases more and more with time ; until it becomes the striking feature of the case. This is especially apt to occur in the very old, and depends partly on absorption of the bony structure of the cervix femoris, partly on progressive relaxation of the ligaments and muscles about the joint. It is, like the analogous change often noticed in hip-joint disease in children, strictly a luxation ; although when, as is very apt to be the case, the disease described by Adams as “chronic rheumatic arthritis,” occurs in connection with such injuries, the acetabulum is worn away and enlarged so that the head of the femur does not actually escape from it. Here the head of the femur is brought into relation with a new portion of the os innominatum, higher up than the part which normally constitutes the socket ; the luxation is only partial.

From this progressive shortening of the limb must be distinguished that which comes on a few hours after the injury has been sustained, and which is a very reliable sign of fracture. Such shortening cannot possibly take place unless either the relation of the femur to the acetabulum is changed, or the femur is broken so that one portion of it can slide or be drawn past the other. But if the former were the case, the symptoms must have been present from the very first. Since the bone, once out of place, cannot be so readily slipped in and out again, unless indeed the rim of the acetabulum be broken, in which event other signs would be also present.

Hence we may speak of three forms of shortening : (a,) which begins imperceptibly, and increases gradu-

ally; which means nothing, since it may be caused equally by the changes in the neck and head of the bone after mere contusion, by chronic rheumatic arthritis, or by absorption of the fragments if the bone has been actually broken; (*b*,) that which is first made out soon after the injury, and known to have been consecutive upon this and not coeval with it; which means fracture; (*c*,) that which we either know to have been, or cannot say was *not*, produced at the moment of injury; which may mean either fracture or luxation. Here the first thing to be done is to find out whether the shortening can or cannot be corrected by extension; if it can, and is reproduced again when the limb is left to itself, there is fracture, the seat of which remains to be determined. But if the shortening cannot be so overcome, we cannot yet exclude fracture; since there may be impaction, or such spasm of the muscles as to keep the limb firmly drawn up. In such cases the diagnosis must be based upon other symptoms, and perhaps must be reserved until cleared up by time.

In making the diagnosis between extra and intracapsular fractures, the degree of shortening, and other facts connected with it, may give some light. Generally speaking, it is greater, more easily reducible, and recurs more readily after reduction, when the fracture is within the limits of the synovial membrane than in other cases. Consecutive shortening, gradually increasing for weeks or months after the injury, will almost certainly follow intracapsular fracture, from yielding of the fibrous structures; it may also take

place, from absorption of the fragments, in impacted fracture. The only distinctive test in such cases, and that not a sure one, would be the greater firmness of the parts in the latter state of things.

One feature is almost always presented by recent impacted fracture, and that is that the shortening, moderate in degree, can be very little if at all reduced, even with the patient in a state of anæsthesia. A slight crepitus, perhaps only felt at times, would add much to the probability of this view.

Everson or Inversion of the Foot.—No matter at what point fracture of the femur occurs, the general rule unquestionably is, that the foot is turned outward. Sometimes it lies on its outer surface. All authors agree that it is very rarely inverted, although this state is sometimes met with, and may even resist all efforts at changing it.

Such a case, where inversion of the foot existed, with some shortening, some limitation of motion in the hip joint, crepitus either indistinct or wholly wanting, would present a very difficult problem in diagnosis. Here the condition of the surrounding muscles, as to tension or relaxation, may be examined with advantage; and the character of the pain, commonly persistent and severe in fracture, but slight and chiefly troublesome on movement in luxation, may throw light on the question. If the inversion can be overcome with the aid of anæsthesia, by merely rotating the limb, we may assert almost positively that there is no dislocation; in muscular or strongly-knit persons, this would be certain, while in the very relaxed and feeble, the nature of

the change in the shape of the part under this treatment would be apt to clear up all doubt.

Eversion is so rare in luxation, and when it exists is usually in so slight a degree and so difficult either to increase or to lessen by manipulation, that it may be regarded as indicative of some other lesion, especially if there is at the same time shortening.

Dislocation once excluded, either eversion or inversion, if persistent, may be looked upon as evidence of impaction, and, therefore, of extracapsular fracture. Every specimen or representation of plainly intracapsular fracture within my knowledge has shown the neck of the bone divided directly across, or so much so as to render impaction impossible.

Unnatural Mobility.—In some fractures, such as those of the shaft of the humerus, this symptom is apt to be very marked, so much so as often to be sufficient of itself to show the character of the lesion. But the greater the mass of muscle about the seat of injury, the more difficult is the appreciation of the exact seat and degree of mobility, if there is any, in the bone. The near neighborhood of a joint, by making it normal that there should be a certain amount of movement, adds much to the obscurity of the question. An especial element of obscurity exists in the hip, by reason of the angle formed by the neck and shaft of the femur, and the depth at which the joint lies.

Preternatural mobility of the thigh on the pelvis, clearly made out, may be regarded as conclusively indicative of fracture. In mere contusion the stiffening of the muscles, and the inflammatory effusion, must

hinder motion, whether active or passive ; while there is no form of luxation in which certain movements, varying according to the degree and direction of the displacement, are not abruptly limited by the contact of the neck of the femur with some portion of the os innominatum.

But, in fracture, can preternatural mobility be readily detected, and if so, when and in what direction will it show itself?

Various causes will tend to prevent its detection. Of course, if the fragments are impacted, it is impossible for them to be freely movable upon one another. And even if not impacted, they may be so engaged, one in front of the other, as to limit their play.

Swelling of the soft parts, and effusion into the joint, will likewise obscure this symptom. Spasm of the muscles lying close to the neck of the bone will, somewhat in the same manner as impaction, render this mobility indistinct.

Hence it will be most easy to detect this condition in thin persons, with long bones, and in a state of relaxation of the muscles.

What will be the special form and direction of the mobility, if felt? We are told by most writers that the trochanter is found, upon rotating the foot into inversion and eversion, to describe a smaller arc than normal ; the centre of the circle being supposed to be the seat of fracture, instead of, as when the neck is sound, at the acetabulum. Several elements of doubt must, however, exist in most cases in regard to this point. Thus, the entanglement of the two fragments

may be such as to cause the inner one to follow, in some measure, the passive movements impressed upon the outer one. The stiffening of the parts may render an exact estimate of the scope of motion difficult. The muscular mass may be large, and unusually firm by reason of inflammatory effusion. I merely mention the great pain which the examination would cause in some sensitive persons, but need not dwell on it, since the use of anæsthetics affords an obvious means of setting this aside.

Maisonneuve, in 1844, published a notice of a new diagnostic test in injuries of the hip; viz: that in fracture of the cervix femoris, the patient being laid on his face, the thigh could be raised so as to carry the knee further back than in the normal state, since this movement was no longer limited by the contact of the cervix with the posterior edge of the acetabulum. And undoubtedly, if made out, this sign would be conclusive. But the degree of mobility of the thigh backwards on the pelvis varies in different individuals. It seems likely that a case which presented this sign would not be without other marks of easier recognition. Moreover, and this is not the least important consideration, much harm might be done by even careful handling in the endeavor to make out the point.

Loss of Power in the Limb.—This symptom is so variable, and apparently so capricious, that it affords but little light in any single case. Patients with mere contusion are sometimes unable to lift the limb, or even to draw up the knee in bed; patients with fracture have been known to walk on the day of injury, and even the

day after. So also in luxations, the amount of voluntary motion, and of passive mobility, differs greatly in different patients. Here, however, except when the pressure upon or the stretching of nerves interferes, (as for example in luxation into the ischiatic notch, when the sciatic nerve is apt to be subjected to painful tension,) the movement is free within certain limits, but is checked suddenly by contact of the bony surfaces.

Another point may be noted, which is, that in cases of fracture or dislocation, the motions and use of the limb are as a general rule completely lost within two or three days after the injury, if not from the very outset; after which they are gradually restored, with more or less rapidity and completeness. On the other hand, a severe contusion is at once followed by more or less entire loss of power, which either begins very soon to be repaired, or becomes steadily more and more complete, from pathological changes induced in the joint, or in the neck of the femur.

The consideration of these facts may serve to aid us in cases, the diagnosis of which becomes a question at a very late stage, when the history of the lesion is to be interpreted.

From the foregoing review of the symptoms met with in injuries of the hip, it seems clear that no one of them can by itself suffice as the ground of a diagnosis. From the degree of pain and of loss of power in the limb, we can learn nothing. The age of the patient may somewhat influence the probabilities, but very uncertainly. It is from the various combinations of abnor-

mities in shape, muscular relations, length of the limb, position of the foot, and mobility, together with the existence, or non-existence of crepitus, that we must seek to determine the nature of the lesion, and thus to decide upon a plan of treatment. It is not within the scope of this article to enter upon this latter branch of the subject; suffice it to say, that while the actual range of remedial means is but narrow, their degree of success is often in some measure a test of the accuracy of the diagnosis. The first point to be settled is whether or not there is luxation of the head of the femur, since if there is, immediate measures must be resorted to for its reduction. Unless this question can be set at rest, and dislocation excluded, the survey must be repeated with the utmost care every day or two, as time brings changes which may afford new light.

With regard to the prognosis, the early detection of displacement, when it exists, is of importance, for obvious reasons. Perhaps it is needless to urge that the surgeon should be very guarded in giving his opinion as to the ultimate issue of any case, since even where there is neither fracture nor luxation, and especially in the old and infirm, inflammation or chronic pathological changes may ensue in the parts, and disappoint the hopes of both himself and his patient.

ART. III.—*The Non-efficacy of the Bromide of Potash in Chordee.* By W. F. MUNROE, M.D. one of the Physicians to the Boston Dispensary.

As there appears to be a tendency, at the present time, to consider the bromide of potash a specific in nearly every stage of nearly every disease, I have thought that a little negative evidence might not be unseasonable.

Nearly all the works upon venereal diseases recommend its use in chordee, and I have used it persistently, with such unsatisfactory results, that I have abandoned its use, unless specially indicated by an unnaturally nervous condition of the patient. I would say here that the medicine has been supposed to produce anæsthesia of the urethra in addition to its effect as a nervous sedative.

The list of cases of which I have preserved the records comprises thirty-six. These I give in the order in which they occurred.

CASE I. Chordee VERY severe. Potass. brom. gr.x, ter in die, and repeat to gr.xxx at night if necessary. Hot lotion. No perceptible effect. Opii gr.i, camph. gr.iii, in pill. Slept well.

CASE II. Sufficient to wake patient three or four times in the night. Potass. brom. and hot lotions as in I. Omitted lotions, when chordee returned. Resumed lotions and omitted potass. brom. Slept well.

CASE III. Of medium severity. After an unsuccessful trial of the bromide, as in Case II, ordered camphor and opium pill, as in Case I. Great relief.

CASE IV. Quite a severe case complicated with chancroids, which prevented the use of the lotions. Carried the dose of the bromide to gr.xl at night, and gr.x morning and noon. Perhaps some good effect, but very slight. Substituted ext. hyoscyami alcoholici gr.viii, with good but not perfect results.

CASE V. Complicated with balanitis, rendering the lotions impracticable. Potass. brom. as in Case IV, without success. Pill camph. and opium. Slept well.

CASE VI. Very severe. Neither the bromide, nor three camph. and opium pills had the desired effect. Subcutaneous injection of morphine, (gr. $\frac{1}{2}$), gave partial relief.

CASE VII. Of medium severity. The bromide appeared to have some efficacy, but I was unable to try the effect of the omission of the lotions.

CASE VIII. After the failure of the bromide, administered ext. hyoscyami alc. gr.vi, with success.

CASE IX. Tried potass. brom., camph. and opium pills (3) and ext. hyoscyami alc. gr.xii, unsuccessfully. Ordered inunction of the parts with ung. belladonnæ, and upon the second application the chordee ceased: whether from time or the ointment, is more than I can say.

CASE X. Similar to Case VII in all respects.

CASE XI. Similar to Case V in all respects.

CASE XII. Similar to Case VI in all respects.

CASE XIII. This was complicated with chancroid and balanitis. The patient, a gentleman living with his family, and entirely unaquainted with venereal disease, had been twelve days without treatment, during which time he had obtained sleep, by taking opiates. His mental condition was worse than his

physical, in fact, shame at having yielded to temptation, added to the fear of detection, had made him a most pitiable object. The chordee, which was quite severe, was very much relieved by the bromide (gr.xxx,) at night.

CASE XIV. The bromide having afforded no relief ordered lupulin gr.viii, camph. gr.i, with better success.

CASE XV. The bromide having afforded no relief ordered lupulin gr.viii; camph. gr.i, with better success.

CASE XVI. Similar to Case VI.

CASE XVII. Similar to Case IV.

CASE XVIII. Similar to Case I.

CASE XIX. Similar to Case I.

CASE XX. Similar to Case XIV.

CASE XXI. Similar to Case XIV.

CASE XXII. Complicated with inflammation of the lymphatics of the dorsum, and bubo. After the failure of the bromide, ordered the recipe of Case XIV with success.

CASE XXIII. Similar to Case III

CASE XXIV. Similar to Case III.

CASE XXV. Similar to Case III.

CASE XXVI. Similar to Case III.

CASE XXVII. That of a sailor who had been much exposed, and exhausted by hard labor, in a storm, whilst suffering from gonorrhœa. When I saw him he had a bubo and swelled testicle, as well as very severe chordee. After a trial of the bromide, opium, etc., succeeded in affording relief by subcutaneous injections of morphine, gr.i.

CASE XXVIII. A mild case, in which the bromide apparently gave the best results.

CASE XXIX. Much like case XXVIII, but not quite so well marked.

CASE XXX. Similar to case XIV.

CASE XXXI. Similar to case II.

CASE XXXII. Of medium intensity. Ext. hyoscyami alc. gave relief after the failure of the bromide.

CASE XXXIII. Of medium intensity. Ext. hyoscyami alc. gave relief after the failure of the bromide.

CASE XXXIV. Similar to Case XIV.

CASE XXXV. Similar to Case XIV.

CASE XXXVI. Similar to Case XIV.

RESUME. In all the cases, hot water lotions at night were ordered unless contra-indicated. None of the usual recommendations as to sleeping upon the side, upon a hard bed, etc., etc., were neglected.

In twenty-nine of the thirty-six cases the bromide appeared to have no effect; in four (IV, VII, X and XIV,) its effects were exceedingly doubtful; in three cases only (XIII, XXVIII and XXIX,) were the results of its administration at all satisfactory. In one of these even (XIII,) I considered that the relief was due more to the effect of the drug upon the overstrung nerves of the patient, than to its anaphrodisiac properties.

Reviews and Bibliographical Notices.

ART. I.—*Man; Where, Whence, and Whither? Being a glance at Man in his Natural-History Relations.* By DAVID PAGE, LL.D., F.R.S.E., F.G.S., etc. First American edition. New York: Moorhead, Bond & Co. 1868. pp. 197.

“AT the present moment,” says Mr. Page, “there are few scientific questions exciting so much interest as the origin and antiquity of man. And yet, general as the interest is, there is no subject so furtively studied and so unfairly dealt with.”

Summing up the inquiry, the author arrives at the following conclusions:

“1. That, *Zoologically*, man and other animals belong to the same vital scheme; that this scheme is based on a determinate and pervading plan; that adaptive modification of structural facts seems to be the principle according to which the higher and more complex forms are evolved from the lower; and that this connection establishes relations between him and his fellow creatures that are inseparable.

“2. That *Geographically*, man, like other animals, is influenced by his physical surroundings; that these influences extend alike to his material and mental nature; that they are important factors in the production of variation among mankind; and that, taken in connection with the principle of adaptive modification, they afford some indication of the methods through which vital development is effected.

“3. That *Ethnologically* man appears in several great varieties distinguished by mental and physical characteristics; that the study of these characteristics leads us to regard some as higher and others as lower in the scale of being, that judging from all we can learn from history, tradition and analogy, the higher must be the

more recent and the lower the more ancient varieties; and that carrying out this principle of descent, the lowest known variety may have been preceded by others lower and lower in proportion to their antiquity.

“4. That *Functionally*, man, like other animals, has his relations to external nature, the requirements of which are imperceptible; that being endowed with higher mental as well as with higher structural capabilities, he exercises a wider influence on vitality than other animals; that in virtue of this influence, and according to his civilization, he extirpates, disseminates and modifies plant-life and animal-life; and that in proportion to his superiority he in like manner modifies his own race, the higher ever passing over the lower, and the earlier ever disappearing before the spread of the recent and advancing.

“5. That *Historically* we can have no certain evidence of the outcomings and incomings of those early races which preceded all history; that even were tradition reliable and history certain, it is as impossible for the race as it is for the individual to trace itself back to its origin; that we can only arrive at a notion of man's antiquity by inductive reasoning from the evolution of nationalities, the growth of language, and the progress of civilization; and that this induction for all pre-historic time must be founded exclusively on the discoveries of geology.

“6. That *Geologically*, there is the amplest evidence of man having been an inhabitant of western Europe for ages preceding the popularly received chronology; that man's occupation of Europe does not fix the measure of his antiquity in northern Africa and Asia, to which everything points as the region from which the races of Europe were descended; that the discovery of pre-historic remains in Asia could not be received as the earliest of indications of the human race, but that geology must seek for the earliest traces of man in the regions that are now occupied by the lowest varieties—thus implying an antiquity for the human

species that cannot be expressed in years and centuries, but only relatively to other geological events.

“7. That *Genetically*, man must deal with his origin as he does with his other natural-history relations ; that, as he is inseparably associated with the great scheme of life, so he must apply to his own species whatever genetic process he may seek to apply to his fellow creatures ; that if there be a plan of progressive development such as natural science has been recently striving to establish, by which the higher forms of life have been gradually evolved from the lower, then man must seek for his origin in the same course of development : that this hypothetical process, as applied to man, does not involve anything degrading or materialistic, but is simply an effort of science to present some comprehensible indication of the creative method which as far as we can perceive, works only through means and processes ; and that though the process could be proved to demonstration, it would still leave untouched the plan to which all the ascensive orders of life have ever conformed, and which can only be resolved into the will of the Creator.

“And lastly that, *Progressively*, the whole history of the past as well as the experience of the present point to an upward ascension of vitality ; that all the forces of nature with which this ascension has been associated, or upon which it depends, being as active and operative as ever, we may fairly infer a corresponding progression in the future ; that in virtue of his higher nature the progression will be more rapid and perceptible in men than in the lower animals ; and that physically, intellectually, socially, and morally, the developments of the future will transcend the men of the present as far as the men of the present transcends all or any of the varieties that ever went before him.”

The work is republished in excellent style, and cannot fail to strengthen the convictions of those in harmony with the author, and to challenge the refutation of its opponents.

ART. 2.—*Report on Leprosy by the Royal College of Physicians.* Prepared for Her Majesty's Secretary of State for the Colonies; with an appendix. London: Printed by George Eyre and William Spottiswoode, printers to the Queen's most Excellent Majesty. For her Majesty; Stationery Office. 1867. pp. 247. royal 4to.

This valuable Report presents by authority the most important mass of evidence regarding the condition and treatment of Leprosy afforded to the profession. The first suggestion of the work was made on the 19th of February, 1862, by James Walter, Governor in chief of the Windward Islands, in a despatch to the late Duke of Newcastle, then Her Britannic Majesty's Secretary for the Colonies. By direction of the Duke, the College of Physicians of London were requested to undertake the task of framing the necessary interrogatories on the subject, and of dealing with the results of the inquiry. The College of Physicians promptly appointed a Committee of their Fellows, consisting of the following gentlemen: Drs. Budd, Owen Rees, A. Farre, Gull, Milroy and Greenhow, who prepared a list of interrogatories which were officially sent not only to the Windward Islands, but to the British possessions in India, and also to various foreign countries, while some replies were received from gentlemen of experience then residing in England.

The volume before us embodies the official correspondence with the Royal College of Physicians, the report itself, abstracts of documentary evidence, and an appendix containing a vast amount of matter of great interest relating to the subject, which our space will not permit us to refer to.

"After much consideration the committee deemed it best to frame their report upon the voluminous evidence submitted to them in sections corresponding with the interrogatories, presenting, in the first place, an arranged selection of the replies under the successive

interrogatories, and then giving in like succession the conclusions they have formed on the subject matter of each interrogatory from a review of the whole evidence before them."

The following are the conclusions of the Committee :

I.

Is leprosy known in the Colony of—? If so, be pleased briefly to describe it as it occurs there.

a. Are there several different forms or outward manifestations of leprosy? If so by what names are they respectively known? *b.* Are these several forms in your opinion only varieties of one common morbid state? or are they specifically distinct diseases, having no affinity with each other? *c.* Please to enumerate succinctly the more obvious and distinguishing characters of each form of leprosy which you have seen.

The distinctive characters of leprosy are the same in all parts of the world where the disease has been observed. There are certain kinds of cutaneous eruption and discoloration, associated with a tendency to ulceration or the death of the affected part, and with disorders of innervation, more particularly the impairment or loss of sensibility.

Two forms of the disease are very generally described in the replies, viz; the "tubercular" or "tuberculous," and the anæsthetic. Inasmuch, however, as the term "tubercular" and "tuberculous" might convey the impression that leprosy is allied to "tuberculosis" it is proposed to designate the first of the forms by the term "tuberculated." Again the loss of sensibility is not confined to the anæsthetic form of the disease, although this symptom generally occurs earlier or more marked in it than in the "tuberculated form." The arrangement, therefore, of the different forms of leprosy into the tuberculated and the non-tuberculated appears preferable; as, however, these forms not unfrequently co-exist, or succeed one

another in the same patient, they must be regarded as modifications of one morbid condition. Among the varieties of non-tuberculated leprosy are included the cases that are sometimes designated "leucopathic," characterized by white spots or blotches in the skin which are more or less decidedly anæsthetic; and also these cases in which the cutaneous eruption consists of circular or annular spots, not unlike those of the *lepra vulgaris*, but which in the centre of the spots is anæsthetic, and has besides other distinct characters of leprosy. These two last named varieties of the disease are more frequently mentioned in the replies from the East Indies than in those from other countries. In most countries where leprosy exists, the term "leprous" is ignorantly applied to many diseases which cannot properly be regarded as true leprosy. Hence various chronic maladies of the skin occurring in unhealthy persons living in poverty and neglect of cleanliness, are often confounded with it, and the patients being regarded as "lepers" are treated as outcasts and objects of abhorrence. Elephantoid enlargement of the lower extremities, is also in some places considered as allied to leprosy. The circumstances of the two diseases bearing the same general name (elephantiasis,) in medical writings has doubtless contributed to this opinion. They appear to have no real affinity with each other; although both are sometimes endemic in the same countries, and occasionally co-exist in the same patient.

II.

At what age does this disease generally manifest itself, and what are usually the earliest symptoms observable?

a. The development of the disease is not restricted to any period of life. It appears to occur most frequently about puberty, and from that period of life to maturity; but it has been observed from infancy or from early childhood, up to fifty years of age and up-

wards. Occasionally, but very rarely, signs of the "tuberculated" form have been seen in the offspring of lepers at or soon after birth. An arrested development of the body, and various congenital malformations are said to be occasional results of the hereditary tendency to leprosy. The tuberculated form is said to manifest itself generally somewhat earlier in life than the non-tuberculated form.

b. Before the appearance of any visible or external symptoms there is often, for a longer or shorter period, a feeling of general malaise. This is obscurely marked and ill defined, without any uniform or regular course, and is usually indicated by recurrent ague-like chills, occasional feverishness and sense of internal heat; by pains, or creeping prickly sensations, or formication and itching in the limbs; by a numbness in a hand or foot, or in one or more of the fingers or toes, and by general weakness and depression both of mind and body. Sometimes, especially in certain cases of the non-tuberculated form, there is in the early stage of the disease an intense burning sensation, and a painful tingling along the course of one or more of the nerves of a limb, increased by pinching or tapping the skin over the affected part, and sometimes accompanied by a dry fissured state of the skin, falling off of the hair, and shrivelling of the nails. Prior to the eruption of the elevated, discolored, and shining spots characteristic of the tuberculated form, there is not unfrequently an erythematous redness of the parts about to be affected, generally the face, attended with a feeling of heat or burning, a puffiness of the features and an increased sensibility of the skin. The duration of the symptoms varies much in different cases before the appearance of cutaneous tubera or nodules. The hyperæsthesia, or increased sensibility is invariably replaced in course of time by anæsthesia of the affected parts. The excessive perspiration from the hands, mentioned by Dr. Jackson, as occurring among some of the natives of Calcutta, deserves to be noted as an evidence

of the leprous diathesis, if not of the actual disease. This symptom is also noted by Sir Ronald Martin.

III.

At what period of life, and within what time does the disease usually attain its full development; and at what period of life, and after what time does it usually prove fatal?

No definite or satisfactory conclusion can be drawn from the evidence received on that part of the inquiry. Much will depend upon the age at which the disease may have first appeared, upon the constitution of the patient, and the circumstances of his condition.

. . . . The non-tuberculated is usually slower in its progress than the tuberculated. In both the disease sometimes remains stationary for many years, and life is occasionally prolonged to old age; but the arrest of the malady is more frequent in the non-tuberculated form. Lepers do not usually die from leprosy, but most frequently of some intercurrent disease, as diarrhœa or dysentery, or of inflammation of the lungs and air passages. If they should happen to be attacked by the intermittent or remittent fevers of the country, they usually succumb. Disease of the kidneys attended with albuminuria, seems to be not unfrequent; and in some cases the patient sinks from general marasmus and atrophy. Destitution and neglect aggravate the liability to the above maladies and the danger of their occurrence. Children of leprous persons are less amenable to medical treatment than other children of the same age and condition.

IV.

Is the disease more frequent in one sex than in the other? If so, in what proportion?

The committee found it difficult to decide this question. It is more frequently seen in males. Of five hundred and forty-three deaths among leprous persons at Bombay, during twelve years, four hundred and nine occurred in males.

V.

Is it more frequent among certain races? among the white, colored, or black population? and in what relative proportions?

In hot climates more frequent among the dark races. Most cases among the whites are said to occur in persons born in the country, or who have long resided in districts where the disease is endemic. . . . In Egypt the Bedouins are said to be exempt. In the Mediterranean Archipelago the poor Greek population appear to be much more frequently affected than the Mohammedans. In India all the native races are liable to the disease. The European residents are seldom attacked, the Eurasians more frequently. The liability of the Jewish race is not determined.

VI.

In what condition of society is the disease of most frequent occurrence, and what are the circumstances which seem to favor its development in individuals or in groups of individuals? (This question is subdivided into further headings.)

The great majority of cases of leprous disease in all countries occur among the lowest and poorest of the people: the better conditioned classes are, however, far from being exempt; their liability appearing to vary a good deal in different countries. In a few of the replies it is surmised that the latter are nearly as liable to the disease as the poor. Low and malarious districts, miserable unwholesome dwellings, personal uncleanness, unwholesome insufficient food, fish much salted, tainted, or semi-putrid, deficiency of fresh meat and vegetables, consumption of rancid oil in large quantities and certain sorts of pulses, are noticed as conditions associated with or considered to influence the malady.

VII.

What conditions or circumstances of life seem to accelerate or aggravate the disease when it has once manifested itself in an individual?

In addition to those mentioned in the last answer, intemperance, sexual excess, and whatever tends to lower the vital energies and to impoverish or deteriorate the blood, are always hurtful. Imprisonment, salted pork, incautious use of mercury.

VIII.

Does the disease often appear to be hereditary? Have you known instances where one member only of a family has been affected, while all the other members remained free from any trace of it?

There is almost an unanimous concurrence of opinion that leprosy is often hereditary; but that it also frequently occurs in persons in whom no hereditary tendency can be traced, appears to be equally certain. Ratio not determined. The same type of disease is not always transmitted. It skips a generation not unfrequently. In China it is said to become mild in the third generation, and to wear itself out in the fourth. Intermarriage takes place in the same grades. One member of a family alone is often affected.

IX.

Have you reason to believe that leprosy is in any way dependent upon or connected with syphilis, yaws, or any other disease?

Leprosy is very generally considered to be a disease *sui generis*, quite independent of and unconnected with any other disease. Certain forms of leprosy and syphilis are liable to be mistaken for each other, and may co-exist in the same patient.

X.

Have you met with instances of the disease appearing to be contagious in the ordinary sense of that term, i. e., communicated to healthy persons by direct contact with, or close proximity to, diseased persons? (This question is further subdivided.)

The all but unanimous conviction of the most experienced observers in different parts of the world, is

quite opposed to the belief that leprosy is contagious or communicable by proximity or contact with the diseased. The evidence derived from the experience of attendants in leper asylums is especially conclusive upon this point.

XI.

This question relates to the enforcement of the segregation of lepers, in which great diversity of practice exists.

XII.

This question relates to the public provision for the leprous poor, which is shown to be almost always scanty and insufficient.

(The reviewer visited in 1861 the asylum for lepers in Havana, Cuba, which was admirably appointed. The Academy at that time was considering the very subject on which the present report is written.)

XIII.

The data of leprous persons maintained at the public expense afford no criterion.

XIV.

No accurate conclusion can be formed by the committee as to the increase or decrease of the malady of recent years.

XV.

What results have you observed from the hygienic, the dietetic or the medicinal treatment of the disease? Does leprosy ever undergo a spontaneous cure? and if so, at what stage of the disease? Are you aware what proportion of the leprous poor treated at the public expense in the Colony of — recover wholly or partially?

Good hygiene, improvement of the physical and moral conditions, may retard or arrest the earlier stages, and mitigate the severity when more fully developed. Without these conditions medicine is unavailing, and

there is no specific or direct treatment. Tonics and alteratives, of which iron and iodine are preferred. The effects of mercury have been stated. The systematic use of simple, saline or sulphureted baths appears to be decidedly beneficial. The hot iron over the spine has diminished the anæsthetic symptoms. Spontaneous cure is not to be expected.

XVI.

Relates to the census, concerning which no satisfactory data were furnished.

XVII.

Relates to the ratio of lepers to townships and districts, and generally for additional information.

The first section elicited no information. The autopsies of Dr. Carter, of Bombay, confirm the accuracy of the researches of Drs. Danielsen and Boeck, who were pioneers in this field.

“*The tubercular form.*—In the developed stage of the disease, the corion or cutis vera of the affected part is tumefied and thickened; on squeezing it between the fingers, a yellowish white, viscid, or gruelly fluid exudes. The subcutaneous cellular tissue is infiltrated with a gelatinous or lardaceous effusion, firmly adherent to the corion. The subcutaneous veins and nerves are found thickened and enlarged from the deposit of this effused matter on their outer surface. In the advanced stage of the disease the deep-seated as well as the superficial nerves, especially when lying near to ulcerations, are very much thickened and enlarged in consequence of the results of inflammation of their sheaths. The mucous membrane of the nares, fauces, and larynx is swollen, occupied with tubercles, soft, and of a yellowish color, often ulcerated. The opening of the larynx is frequently the seat of morbid deposit, so that the rima glottidis is sometimes nearly closed up. Tubercles are occasionally found on the mucous lining of the trachea and large bronchi. The cervical glands are occasionally much enlarged. The substance of the lungs

is seldom altered, but the pleura is often much thickened in consequence of tuberculous deposits in its cellular tissue. The sub-peritoneal cellular tissue may be similarly affected as the sub-pleural. The mesenteric glands are generally more or less enlarged. Isolated rounded ulcers are occasionally found on the inner surface of the intestines. The liver is sometimes the seat of the deposit of tubercles. The kidneys are almost always found more or less seriously affected in the advanced stage of the disease, the morbid changes being usually those characteristic of albuminous nephritis. Within the cranial and vertebral cavities no distinct or uniform morbid changes have been detected, either in the substance of the brain or spinal marrow, or of their investing membranes.

“*The Anæsthetic Form.*—When the disease has been completely developed, and the paralysis of the muscles as well as of the skin has been decided, the skin is often found to be very much attenuated, all the fatty matters to have disappeared, and the substance of the muscles to be atrophied. The cellular tissue in the parts surrounding the seat of the ulceration or necrosis is infiltrated with a serous or lardaceous deposit. The nerves which traverse this infiltrated tissue, as well as the deep-seated ones, are excessively swollen; their sheaths are filled with a firm albuminous matter in which the ultimate nervous filaments are imbedded; alterations which are considered to be the result of inflammation of the nerves, and are indentially the same as those which are found in the tuberculous form of the disease. Under such circumstances the axillary and inguinal glands are often much enlarged. The central organs of the nervous system are usually the seat of notable morbid changes. These appear to consist chiefly in congestion of the posterior or dorsal veins of the spinal marrow, effusions of an albuminoid serum within the arachnoid membrane, and consolidation or hardening of the spinal cord at the part affected. Generally it is somewhat contracted in size, and

sometimes it is so atrophied as not to be much larger than a quill in its dimensions. The cineritious substance is much altered in aspect, having acquired a dirty yellow color, so as to resemble a good deal the medullary substance. The roots of the nerves within the vertebral canal are invested with albuminous exudation. Sometimes the axillary and the ischiatic plexuses and the principal nerves issuing from them are found to be visibly atrophied. The above changes are always most conspicuous in the cervical and the lumbar regions of the spinal marrow. The morbid appearances observed within the cranial cavity appear to be similar in character to those which exist within the spinal cavity, but in a much less decided or advanced degree. Whenever there had been well marked anæsthesia of the face the Casserion ganglion was always found to be the seat of some change. There was usually sero-albuminous effusion around it, and this was sometimes so considerable that the dura mater was distended and bulged at the part; the nervous filaments of the ganglion seemed to be glued together by the exuded matter. With respect to the blood in leprous patients, the most marked abnormal change from the standard of health appears to consist in the excessive quantity it contains of albumen and fibrine; these are precisely the principal elements, more particularly the albumen, in the morbid effusion with which all the pathological alterations, characteristic of the disease are connected. The same sanguineous dyscrasia is found in both forms, the tuberculous and the anæsthetic, of leprous disease."

The chief results of the elaborate investigations to which we have alluded in this review are: 1, the elimination of leprosy from the catalogue of contagious diseases; and 2, the hope that improvement in the hygienic conditions of the inhabitants of those countries liable to this terrible scourge, may finally cause it to disappear.

An inestimable boon to many thousands of afflicted families will follow the dissemination of the first principle: while every influence of governments and individuals should enforce the second.

ART. 3.—*Klinik der Ohrenkrankheiten*. Ein Handbuch für Studierende und Aerzte. Von DR. S. MOOS. Mit 26 in den text gedruckten Holzechnitten. Wien: 1866.

Clinic of Diseases of the Ear. A Handbook for Students and Physicians. By DR. S. MOOS. With 26 wood cuts. pp. 348. Vienna: 1866.

The clear type and well executed wood cuts of this treatise make a pleasant impression at first sight, and a better acquaintance intensifies the agreeable quality of this impression. The author does not assume the polemic attitude which has characterized several of the late aural books, but gives simple and just statements as his own experience leads him to decide points of pathology and practice. The book is not too large nor its method too elaborate—while it is truly a good handbook for the student or physician.

It is divided into two principal portions; first, the general, which includes the method of investigating the ear; second, the special portion, which treats of aural diseases. These are classified as those affecting the external, the middle, and the internal ear.

In the chapter on morbid changes of the membrana tympani, twenty-six sketches are given of calcareous deposit in the membrane, in connection with the accounts of the cases. The section devoted to diseases of the middle ear, will naturally attract attention, and the mode of handling the subject will be generally accepted with favor. Dr. Moos finds great benefit in the inflation by Politzer's method, and in a large percentage of cases this supersedes catheterization of the Eustachian tube. But he employs the catheter in cer-

tain cases which he sets forth, as being those where by long-standing disease the elasticity of the conducting media has been much impaired, and for which there can be no relief except by the air pump and catheter. To this he resorts also to break up adhesions in the middle ear. For organic strictures of the tube, where Politzer's bag fails, he uses the catheter and bougie. The nasal douche and the rhinoscope and the otoscope are properly insisted upon. The recommendation to resort promptly to excision of the tonsils when only slightly enlarged, will hardly be acquiesced in by most of our aurists, notwithstanding the author thinks their hypertrophy a chief cause of the obstinacy of pharyngeal catarrh. In chronic catarrh of the middle ear, injections per tubam of warm air, of vapor of sal ammoniac, and of solutions of sulphate of zinc and of iodide of potassium, are employed. These are more or less heroic methods and may be used only for bad cases, and (quoting Politzer in confirmation of his own views) not too persistently, but with pauses of weeks and months. Of internal remedies in these cases, and especially of mercurials, the author has a poor opinion.

But we may not pursue the subject. The chief regret we have is that this little book is available to a comparatively small number of American physicians, because few are familiar with the German language.

ART. 4.—*On Diseases of the Chest; being Contributions to their Clinical History, Pathology, and Treatment.* By A. J. H. WATERS, M.D., etc. London, John Churchill and Sons, 1868. 8vo., pp. 418.

As implied in the title page, and stated by the author in his preface, this work is not a systematic treatise on diseases of the chest, but a series of contributions to the clinical history, pathology and treatment of some of the more important of these diseases. It consists, for the most part, of clinical lectures, with

which are intermingled contributions previously published.

A portion of the work having special interest, relates to the minute anatomy of the lungs. Dr. Waters has given to this subject considerable study. To the cavities with which the terminal branches of the bronchial tree communicate, he applies the name *air-sacs*. The depressions which the air-sacs present on their inner aspect, he calls the *alveoli*. The air-sacs, from six to twelve in number, connected with a single terminal branch, form what he terms a *lobulette*; and the lobulettes comprised within the spores separated by areolar tissue, and denoted by lines on the surface of the lungs, constitutes the *lobules*. We are glad that he does not use the term *capillary tubes*. It would be well if this name *capillary* were dropped from its connection with bronchitis, especially as it is used to designate a variety of that disease in which the so-called capillary tubes are not affected.

Dr. Waters holds that between the air-sacs there is no areolar or connective tissue; but that this tissue exists only between the lobules. We suppose a more correct statement would be that the quantity of areolar tissue between the air-sacs is very small; the entire absence of it in that situation is not probable. Dr. Waters makes a strong point of its absence in concluding that tubercle, the exudation in pneumonia, and the effused serum in pulmonary œdema, are within the air-sacs. This conclusion, however, hardly required discussion; for, excepting gray tubercle or the semi-transparent granulations, no one, that we are aware of, at the present time, contends for the presence of the morbid products just named in the areolar or interstitial structure.

The diseases of which the author treats are pneumonia, emphysema, pleurisy, phthisis, œdema of lungs, pulmonary apoplexy, pericarditis, fatty disease of the heart, chronic valvular disease, and thoracic aneurism. In treating of these diseases he does not offer any-

thing new, or in conflict with the views generally held by the best writers and practitioners. This is not stated by way of disparagement, but rather in commendation of the work. The more important of the facts which pertain to the clinical history and pathology of the diseases treated of are clearly presented, and the relative importance of the facts, generally, are fairly stated. As regards the treatment, the author's views seem to us eminently judicious. We quote the following paragraph relating to the treatment of pneumonia, as affording an inkling of the general tone of practice inculcated: "You will have observed that the treatment which I adopt is not characterized by the exhibition of large doses of any of the so-called anti-phlogistic remedies; that I never withhold nourishment from the patients when they can take it; and that I do not resort to powerful purgatives. On the other hand, you must have noticed that, in many cases, I prescribe stimulants at an early period of the disease, and that they often form the main therapeutic agent on which I rely." The general principles laid down for the management of the inflammatory affections are serviceable and sound; and the discrimination to be exercised in adopting measures of treatment to the varied circumstances in different cases is shown by well selected examples and the accompanying clinical remarks. We heartily commend the work as a good practical guide in so far as therapeutical principles are considered. It shows the author to be a good practitioner.

In the perusal of the work we noted several points which suggested critical remarks. Some of these we will briefly notice.

With reference to the relations between emphysema and tubercle, Dr. Waters states that he has often found tuberculous lungs more or less emphysematous, and he intimates that it may be an error to consider emphysema as affording protection against tubercle. He does not seem to us to distinguish sufficiently primary and secondary emphysema in relation to this ques-

tion. Emphysema pretty often supervenes upon tubercle; as secondary to tubercle it occurs often enough to show that there is a pathological bond of connection. The emphysema, in these cases, is an effect of either the tuberculous affection or of the concomitant bronchitis. The emphysema is, however, rarely considerable, and as such is confined to a greater or less number of disseminated lobules. Occurring in lungs which are not tuberculous, emphysema, beyond a doubt, protects from tubercle. It is certainly rare for patients with emphysema to be subsequently affected with phthisis.

The author states that he has never seen an emphysematous lung the seat of pneumonic consolidation. It is undoubtedly rare for patients affected with emphysema to be attacked with pneumonia, yet cases do occur. Several examples here come under our observation. The emphysema, if considerable, renders the local symptoms much more severe; it also increases the danger to life from apnœa and from the greater liability to heart-clot. The author does not mention the latter as occurring in pneumonia. We are satisfied that, in a considerable proportion of fatal cases, death is attributable to this cause.

In connection with the treatment of bronchitis as connected with emphysema and asthma, certain remedies which are often of marked utility are not mentioned. We refer to the iodide of potassium, the chlorate of potassa, and the muriate of ammonia. The author speaks highly of turpentine, which, as a remedy in chronic bronchitis, we believe to have fallen into an undeserved disrepute.

We were interested in the statement that "in examining the bronchial tubes in a piece of apoplectic lung, I have found them, even to their termination, free from blood; a circumstance which, I think, goes far to prove that any exclusive theory of the production of pulmonary apoplexy from bronchial hemorrhage must be considered erroneous." This theory has been main-

tained by some against probability and direct observation.

We are glad to find in Dr. Waters's work a judicious caution against attaching undue importance to the organic cardiac murmurs. The practitioner is apt to fall into this error. The murmurs *per se* afford but little definite information concerning the severity of the disease; they are altogether unreliable as a basis of prognosis. The danger and the probable duration of life are determined mainly by the amount of enlargement, the kind of enlargement, and the existence or absence of fatty degeneration. We believe the author to be correct in saying that a so-called mitral regurgitant murmur may exist without regurgitation, that is produced within the ventricular cavity, without valvular insufficiency. Although he is not one of those who doubt the existence of a mitral direct or pre-systolic murmur, he evidently is not very familiar with it. When once this murmur is fully understood, and its characters verified by observation in a few cases, it is, of all the murmurs, the one most readily and positively recognized.

With these few detached comments we again commend the work as both interesting and instructive. The diagrams illustrative of the air sacs in health, and of their condition in emphysema, are excellent. We cannot say as much of the diagram designed to show the sacs filled with pneumonic deposit. We have lately been favored with some microscopical specimens showing the pneumonic exudation with wonderful distinctness, prepared by Dr. Robert T. Edes, of Hingham, Massachusetts. We hope that the medical public ere long will have the fruits of Dr. Edes's skill in microscopy.

ART. 5.—*The Indigestions or Diseases of the Digestive Organs, Functionally Treated.* By THOS. KING CHAMBERS, M.D., Honorary Physician to H. R. H. the Prince of Wales, Consulting Physician and Lecturer on the Practice of Medicine at St Mary's Hospital, etc., etc. Second American, from the Second and revised London Edition. Philadelphia: Henry C. Lea. 1868. 8vo., pp. 319.

It is but a short time (March 1868) since we noticed at some length the first edition of Dr. Chambers's book on the indigestions; and we are pleased to see that the approval of the profession, as evidenced by the speedy appearance of a new edition of the work in question, fully accords with the high estimate we then placed upon it. This edition is enlarged by the introduction of additional cases illustrative of the subject matter in hand, but essentially, and in its original parts, i. e., the commentaries based upon the cases, the book has undergone no alteration. We have only to call attention of our readers to this new edition, and to repeat our former commendations of the book.

ART. 6.—*Observations on Crania.* By JEFFRIES WYMAN, M.D., Prof. Anatomy in Harvard College, etc. Boston, 1868. Pamphlet, pp. 34.

This little monograph is a valuable contribution to a subject of study which especially interests the physiologists and ethnologists. In addition to some new suggestions to be employed in the measurement of crania, Prof. Wyman gives an accurate table of the results derived from the examination of twenty-one crania from the Island of Kauai, of the Hawaiian group. This collection is especially valuable from the fact that the crania were all obtained from a single place, and that the catalogues heretofore published have no mention of any skull from this island.

Reports on Progress of Medicine and Surgery.

DERMATOLOGY.

Prepared by E. L. KEYES, M.D., Physician to the Skin Department, Out-door Bureau, Bellevue Hospital.

ART. I.—*On Sclerodermia and its Relations to Elephantiasis Arabum.* [By Dr. VALD RASMUSSEN. Translated from the Hospitals Tidende, for May and June, 1867, by W. D. MOORE, M.D. Edin. Med. Journ., Sept. and Oct., 1867.]

THE disease of which this article very ably and at some length treats, has, after Thirial, been commonly designated sclerema adutorum, sclerodermia, or scleriosis. It dates chiefly from the two last decennial periods, although some observations are recorded from a much earlier time. Thirty-nine cases are referred to by name and date, which were all that have been reported up to the appearance of this article. The first case was by Curzio, in 1755. The one which forms the subject of this article is the fortieth. Although this number is not a very small one, yet it would appear that this disease had never yet been made the subject of an exhaustive monographical essay. The author believes that this depends chiefly upon the fact that the cases met with have been divided among so many hands, (only one observer, Mosler, having seen three,) and because the disease is still, in many respects, enigmatical, and requires to be cleared up in very many points, especially by anatomical investigations. The present case is contributed with the object of clearing up the nature of the disease. It is reported from the Municipal Hospital, and is the first case of its kind observed, or at least reported, in Denmark.

The present case (which I think will bear a somewhat detailed description) is that of a woman, forty-six years of age, married, of healthy parentage, and having herself always enjoyed good health. Her menstruation had always been regular until a few months before her

admission to the hospital, when it ceased. About twenty-one months before, she had observed that a number of small knobs formed in her right breast, (which her occupation exposed to pressure.) These coalesced gradually into a hard mass, and the breast contracted. There was no pain in the breast, but at the same time she suffered from violent rheumatic pains in the right arm. Ten months afterward, she was obliged to enter a hospital for an erysipelatous inflammation of the right arm, extending over the breasts, of a very severe character, complicated with abscess in the right axillary region. A purulent collection also occurred in the left calf. She got well, however, and was discharged, but, shortly afterward, her right arm began again to swell, this time without pain or fever. This comprises everything of importance in the way of previous history. When she entered the hospital for the disease under consideration, she had no pain, was well in every respect. All her functions were regular, but she frequently perspired copiously from the affected part.

I will describe the extent and character of the disease in the author's words :

“The skin, over the whole anterior surface of the right breast, and thence extending over to the left side, where the right half of the left mamma is attached, is seen to be the seat of a considerable hardness ; this is most strongly marked on the right mamma, and the skin surrounding it, both upward towards the clavicle, and downward toward the margin of the ribs. The hardness is very considerable, and the skin is strongly adherent to the subjacent parts. There is no swelling, but a considerable retraction of the subcutaneous connective tissue. The color of the skin on the right side of the breast, and especially on the mamma itself, is brownish ; on the left side it is, on the contrary, streaked with red. The skin has at the same time, here and there, deep immovable folds, like those on the skin of a rhinoceros. The hardness terminates in

a sharp, irregular boundary, which passes from the left sterno-clavicular articulation, down along the outer margin of the left mamma, and thence obliquely down toward the false ribs on the right side. Everywhere on the boundary the induration appears to consist of knots, as large as peas, in the subcutaneous connective tissue, which coalesce internally toward the indurated parts. The right mamma is reduced to the state of a small tubercle of bony hardness, in the centre of which the nipple is seen as a hard mulberry-like body. The hardness extends further over the whole right lateral surface of the neck, where the knots mentioned are very prominent, down over the scapular, axillary, and right lateral regions, but it is here less, and is lost uniformly in the healthy skin. By reason of the retraction of the skin, the head is held slightly bent over toward the right side, and the movements of the thorax are somewhat impeded. The whole of the right upper extremity is swollen to about double its normal size.

This swelling decreased toward the fingers. Except in the flexures of the joint, where it was comparatively normal, the skin was everywhere hard, and could not be lifted up from the subjacent tissues. Sensibility was everywhere normal. Wagner's tactile regions were unaltered. The color was natural. There were but few hairs on the arm. While in this condition the patient was seized with a pleuritis, and died.

The post-mortem appearances were as follows: The right breast was flattened out, the strongly projecting nipple being drawn towards the axilla. The skin over it was brownish, and the whole as hard as wood. The left breast, of the usual size, occupied the median line. The skin on the arm became softer toward the fingers. The color of the arm was natural. On cutting, the epidermis was found remarkably thick, and beneath this there was a dense whitish fibrous substance, extending down in some places to the ribs. The pectoral muscles were free, as were also the intercostals, except about the third and fourth ribs (the most affected part,) where the

intercostals seemed to have entirely disappeared in the fibrous mass. There were some small, reddish-yellow acini of fatty tissue remaining. A few more of these than elsewhere marked the position of the right breast. The glandular tissue of the left breast was replaced by fibrous tissue and a little fat.

The skin over the deltoid was about 8 mm. in thickness. On cutting into the arm, some serous fluid exuded. There was an abundance of fat under the thickened skin. The muscles were pale and moist, but otherwise of natural appearance.

The length of this article cannot allow a full consideration of the autopsy. Suffice it to say both laminæ of both lungs were thickened and sprinkled with small whitish hard tubercles. Some of these tubercles existed also in the diaphragm. The pleura costalis of the right side was especially thick where it corresponded to the region of the third and fourth ribs, and here it was in direct communication with the external formation of connective tissue. There was a hard tubercular mass in the liver with thickening of the capsule over it.

Histological investigation showed an epidermis of ordinary thickness on the arm, some pigment in the cells of the rete, papillæ normal in size and form, the corium rather broader than usual, a large development of connective tissue below, studded with spindle-shaped or roundish cells and nuclei. The vessels—small arteries apparently—were surrounded, as it were, by sheaths formed exclusively of closely impacted cells, like lymph cells, some smaller and nuclei-like. The most peripheral cells were oblong, the outermost spindle-shaped, and separated by a homogeneous or weakly fibrillar intervening substance, soluble in acetic acid. The sheaths covered the vessels, could not be removed by brushing, and on transverse section appeared two or three times thicker than the vessels themselves. As the capillaries passed to the papillæ the cells diminished in number.

In the right breast, the boundary between the corium

and subcutaneous connective tissue was absent, the whole forming a tolerably uniform mass of connective tissue, with everywhere a great abundance of elastic filaments. Here the sheaths around the vessels were slight, in some sections not seen at all. The papillæ were almost all devoid of vascular loops. All that was found in either mamma was some remains of lacteal ducts. The nerves were abundantly present, unchanged on longitudinal and transverse sections. The sudoriferous ducts, hair and fat follicles, exhibited no essential alteration. The hard tubercular masses of the pleuræ, diaphragm, etc., consisted entirely of granular (lymphoid) cells, impacted in a homogeneous intervening substance.

Only five other of the forty cases have been examined anatomically, and in these the result arrived at was far from the same. The author thinks that too much stress has been hitherto laid, in this disease, on the sclerosis, which he believes to be only the ultimate process, the commencement being a series of well marked irritative conditions very like those occurring in elephantiasis arabum.

He proposes to divide the disease into two stages, the first characterized by infiltration (lymphatic œdema, Virchow,) into the skin and subcutaneous connective tissue, with the formation of lymphoid cells in the surroundings of the vessels. The second, by the proper sclerosis, from the development of connective tissue from these cells.

In this case he considers the arm to represent the first, and the breast the second stage of the disease. Following out these views, he shows that a stage of infiltration existed in his own and in several of the reported cases. The commencement is an erysipelatous (more or less intense) inflammation, after this subsides, the disease pursues an apyrexial course. The redness may be so slight in this stage (as in the left breast of his patient) as to be easily overlooked, but a condition of swelling, more or less marked, seems always to

exist early, though it has not been considered of any value. Ten cases of the disease are appended where this stage was particularly well marked.

The second stage, that of sclerosis, and usually the only one mentioned, consists in the development of connective tissue from the lymphoid cells, causing the skin to shrink.

The color is usually, but not necessarily, darkened. The functions are not at all or only slightly diminished. A normal condition of temperature and sensation generally exists. Perspiration is for the most part unaltered; in two cases it was absent, in three diminished, but in the present case it was abundant. The growth of hair is also commonly undisturbed.

Sclerema does not exclude other skin diseases; acne, varioloid, and zona have been observed upon it. The parts longest affected shrink the most. Gillette assumes that the thoracic symptoms which occur in some cases, are due to the incipient affection of the bucco-laryngeal mucous membrane, but this has not been anatomically demonstrated. The tongue and throat have, in some instances, been found affected.

The disease usually but not always starts on the face and spreads from there. It may commence on any part of the body, or on several points, simultaneously or at intervals. It generally runs a slow course, and death is usually the result of a complication.

It usually occurs in the lower classes of society, and sudden and violent cooling of the skin is often assigned as a cause. Out of the forty cases, thirty were women. In the thirty-six cases where the age was given, twenty-two occurred between eighteen and thirty-five, four before eighteen, and only nine after forty.

Complete retrocession is possible only in the first stage of the disease. One case is recorded. After the second stage is reached, recovery is impossible; and the disease itself may cause death, as in two observations quoted, and in the one under consideration, where metastases to the internal organs occurred.

The best treatment seems to be that suggested by Mosler : cod liver oil and iron, with chalybeate baths and inunctions with black oxide of copper, gr.ij to oz.j.

The author believes the nature of the disease to be the same as that of elephantiasis, both in a clinical and anatomical point of view. He traces the more or less severe febrile and erysipelatous symptoms and the swelling (lymphatic œdema, Virchow) which, in one or more attacks, are the forerunners of elephantiasis, mentioning also the apyrexial form ; and shows the points of resemblance between these manifestations and those of the beginning of scleroderma, the swelling of the lymphatic glands being the only characteristic wanting to the latter. Anatomically he finds the similarity still more striking, the great point being the sheaths of lymphatic cells around the vessels, which seem to be identical in the early stages of both diseases (more marked however in elephantiasis, where they extend into the papillæ) and to disappear alike in the old and hard parts of the second stage. In the specimens of elephantiasis examined, the thickness of the lymphoid sheaths was always in inverse proportion to the formation of connective tissue. He considers the seat of the disease to be in the lymphatic system : assuming that all the small arteries of the skin are surrounded naturally by a lymphatic sheath, like, for instance, those in the brain, that lymph cells are formed there in the disease too rapidly to be carried off. If this process goes on very fast, the result is an abscess ; if slower, the cells become converted into connective tissue, and elephantiasis is the result ; if still more slowly, scleroderma. Arning remarks that the abundant development of elastic tissue is against looking upon the disease merely as a chronic inflammation. The author considers the hard tubercular bodies in the pleura and liver as metastatic formations. He looks upon the development of tubercles in his case and one other recorded, as another connecting link between scleroderma and elephantiasis, which occurs also partly in a

diffused form and partly as defined tumors. He believes that the two diseases are one in essence, the scleroderma being what it is on account of the modifying influence of climate, habits, etc. He considers the points in which the diseases differ as unimportant compared with those in which they agree; and proposes a new term for the disease, Elephantiasis sclerosa.

ART. 2.—*On Spargosis Fibro-Areolaris or Elephantiasis Arabum. Its Pathology and Treatment.* By ERASMUS WILSON. [Journ. Cutan. Med., July, 1867. p. 184.]

Among the earliest accounts the Arabian physicians designated this disease, "dal fil," or elephant leg. This with the Greeks naturally became elephas, elephanta, elephantiasis; but as they had already an elephantiasis of their own, this one became the elephantiasis arabum. Dr. Wilson adopts and prefers the term spargosis as being more convenient and more classical.

It is an interesting fact that in the northern islands of the West Indies, Bermuda for example, this disease has a trivial character, and is termed the "rose." It is only in the south that it acquires the larger proportions of the Barbadoes leg. The "rose" is a mild form of cellulitis, attended with erythema, and sometimes approaching to a mild erysipelas. It is painless and slow in its progress, remaining stationary for a while and then advancing. Some febrile action accompanies these paroxysms. It is most frequently seen in middle aged females of sedentary habits, and especially in such as are the subjects of dyspepsia and gastric derangement. Boucnemia (huge leg) is an aggravated form of the "rose." Dr. Wilson relates a case of his own in England much like the "rose." He thinks that elephantiasis, in countries where it is endemic, can be referred to hygienic causes; and is inclined to believe that the same agencies may produce some, but not all, of the cases elsewhere. Dr. Wil-

son mentions the old treatment and the little service it afforded, and then details the first four cases (by Dr. Carnochan of New York) of ligature of the main artery leading to the diseased part for its cure, and the operations of English surgeons which followed. Finally, a case is given at length where Mr. Bryant recently ligated the external iliac for an elephantiasic leg, which, with the assistance of rest, procured a cure in fourteen weeks.

ART. 3.—*Observations on the Treatment of Elephantiasis Arabum by Ligature of the main Artery of the Limb.*

By DR. GEORGE BUCHANAN. [Brit. Med. Jour., 1867, p. 465.]

The case of a young girl is given, in whom the external iliac was tied for elephantiasis of the leg, and upon whom position and bandaging for two months, and a long course of internal treatment, had failed to produce any effect. This operation is the twelfth in which the main artery has been ligated for elephantiasis. The result was particularly satisfactory, but a post scriptum at the end of the article announces that two or three attacks of erysipelas had taken place in the limb, and the disease appeared to be recurring. (This ten months after discharge.)

Dr. Buchanan's ideas on the *modus operandi* of the remedy are as follows: Tying the main artery does not reduce the size of a normal leg, but does that of an elephantiasic one, because the organs of absorption act differently upon normal and abnormal tissues. The activity of absorption as a general rule is in inverse ratio of that of circulation. When the force of circulation is weakened, the process of absorption is unusually energetic. This applies particularly to non-malignant deposits; and absorption being once started will often go on of itself. Thus when a blister starts the absorption of an old effusion, that absorption will sometimes continue on unaided, and this is why

in elephantiasis, after the operation, collateral circulation being soon established in the limb, absorption of the morbid material goes on uninterrupted.

The results of the twelve operations were one death from pyemia; two improvements, of which the present case is one; and nine cures. Gangrene occurred in none.

ART. 4.—*Elephantiasis of the right Leg. Cure by Digital Compression of the Femoral.* By Dr. VANZETTI. [Gaz. des Hôp., No. 144, 1867, p. 572.]

In this case—a servant girl twenty-one years of age—the disease was confined to the right leg. It extended only a few inches above the knee. The right leg around the calf measured ten centimetres more than the left. The color was dark, and the skin hard and inflexible. Sensibility was diminished. The malady dated at six years. Dr. Vanzetti determined to try digital compression of the femoral, but, wishing to avoid the possibility of estimating the effect produced by rest and tight bandaging (if there should be any) as depending upon the arterial compression, he ordered dorsal decubitus, the leg being tightly bandaged and placed upon an inclined plane. At the end of twenty days there was no appreciable change of volume. The patient was now permitted to get up for several days and walk about without a bandage. March 13th, one month after her admission, digital compression in the groin was commenced. After nine hours the integuments became lighter in color and more supple. Compression was not kept up during the night. About twelve hours daily compression was made on the 14th, 15th, and 16th; on the 17th only two hours, as the point where the pressure was exercised had become red and painful. On the 18th the circumference of the leg had diminished by two centimetres. The skin was softer and more flexible. On the interior and posterior aspect of the calf there were a number of

white marks contrasting strongly with the sombre color of the rest of the skin, looking like the "vergetures" seen on the abdomen of a woman who has been with child. From March 17th to 21st, no compression was made, but the improvement still continued. From March 25th to 31st, treatment was again suspended, the patient suffering from headache and fever. May 1st, it was recommenced, and continued twelve hours daily for four days. A starch bandage was then applied, and the patient was allowed to get up. The bandage was reapplied from time to time, the patient walking about, and at the end of one month and a half she left the hospital, being instructed to keep the leg constantly tightly bandaged. She improved constantly, and was lost sight of until three years afterward, when she came to the hospital to visit a friend. Her leg was then and there examined, and it was found that the elephantiasis had "entirely disappeared," that the skin was soft and supple, and that the right leg, when compared with the other, presented a slight "degree of atrophy." The leg had been in this condition for some time. The patient had bandaged it religiously ever since her exit every fifteen days with a bandage sewed together, and then covered on the outside with starch.

ART. 5.—*Case of Elephantiasis Græcorum treated by Ligation of the common Carotid Artery on both sides.* By Dr. J. M. CARNOCHAN. [Am. Journ. Med. Sci., July, 1867, p. 109.]

The case recorded is that of a woman, a native of this country, of healthy parentage, and having herself enjoyed good health up to the age of twenty-eight, when the disease began to appear on the right side of the face. The growth was cut out three times at intervals of about a year, a diagnosis not having been made; it returned each time only to grow the faster. Internal medication had no effect. The disease in-

creased and involved nearly all the head and neck, to the great detriment of all the special senses. Sixteen years after the commencement of the affection the right common carotid was tied. This was followed by so great an improvement that six months afterward the left common carotid was in its turn ligated. Portions of the diseased mass were excised, ligated off, etc., so that eight years after the first ligature was applied the patient was comparatively quite presentable, very comfortable, and could hear, see, smell and taste particularly well.

ART. 6.—*On some of the rarer forms of Skin Disease. A case of Elephantiasis Arabum, treated by means of Ligature of the external Iliac Artery.* By Dr. M'CALL ANDERSON. [Journ. Cutan. Med., July, 1867, p. 180.]

ART. 7.—*Tubercular Anesthetic Lepra.* By Dr. HILAIRET. [Gaz. des Hôp., No. 128, 1867, p. 507.]

ART. 8.—*A case of Elephantiasis Arabum successfully operated on by Dr. Thebaud.* Reported by Dr. WHITALL. [New York Med. Journ., May, 1867, p. 115.]

This very interesting article having already appeared in the JOURNAL, the reader is referred to it there.

ART. 9.—*The Second Stage of Alopecia Pityrodes.* By Dr. PINCUS. [Virchow's Archiv., 41, 3 and 4, 1867, p. 322.]

This long and interesting article is in conclusion of the subject, and in continuation of another article: The First Stage of Alopecia, Vir. Arch., 37, p. 29. Dr. Pincus states that as the first stage was marked by a gradual shortening, the second had for its typical characteristic a decrease in the diameter of the hair and a

substitution of downy for the strong normal hair. His researches were made not only upon the head but upon the hands, where the observation was easier on account of the naturally short life of each hair. It is chiefly upon himself, however, that this article is written. He tabulated his observations upon himself with great accuracy. He divided his own disease into two stages, and his table embraces the dates of June 25th, 1859, and Nov. 9th, 1865.

In 1859, being twenty-five years of age, his hair was very thick. He had been troubled with dandruff for eight years, more especially for the previous five. In the first stage the greatest number of hairs lost in any one day, was one hundred and twelve, the least sixty, and the average seventy-six. The table for the second stage records not only the number of hairs falling out on each day specified, but classes them also according to their kind, their length, etc., including also an estimate on the probable number lost in washing, etc. In this stage the average daily loss was at first one hundred and thirty-five, but that increased to two hundred and fifty, and, before the six years were finished, the daily loss averaged three hundred. The greatest number counted for any one day was five hundred and fifty-four. After a lengthy discussion of the ideas entertained about this disease and of the changes worked by it upon the tissues of the scalp, Dr. Pincus treats of the differential diagnosis to be made with the diseases most resembling it, namely; calvities prematura, alopecia eczematodes, (taking place long after the eczema has ceased to be moist,) alopecia rheumatica, and alopecia syphilitica.

In calvities there is no pityriasis capitis, and a bald spot appears upon the top of the head while the other regions of the scalp are perfectly healthy. Alopecia pityrodes attacks all the middle upper and front parts of the head equally, until nearly up to the forehead.

In alopecia eczematodes the disease is more widely spread and not confined to the middle parts of the

head, as in alopecia pityrodes. The furfuraceous desquamation is greater, and almost always a vesicle or two can be found somewhere upon the head or face.

In alopecia rheumatica, intercurrent headache is very common, the intermissions lasting weeks and even months; the pain is upon the top of the head only, and is connected with a feeling of warmth. It is never increased by pressure, nor does it extend along the middle head towards the front parts. Alopecia syphilitica usually commences a few weeks after the advent of the syphilides. The loss is rapid, sometimes entire, sometimes the scalp is thinned throughout. Frequently careful examination will detect some eruption upon the scalp.

As to etiology, Dr. Pincus concludes from one hundred and twenty-one cases, that the great predisposing causes are two: hereditary tendency, and the existence of a chronic impetiginous eruption upon the scalp before puberty.

ART. 10. *Sporadic Pellagra.* By Dr. GOUGUENHEIM.
[L'Union Méd., No. 145. 1867. p. 344.]

This case is one of peculiar interest, and appears to be conscientiously and carefully reported. The patient, aged thirty-two, was the wife of a well-to-do workman, having no other occupation than the cares of her household. She was born in Paris, and had always lived in that city, nor had she ever been seriously sick. She had been nervous, irritable, easily depressed, sad, at times melancholy, and disgusted with life. After these psychical troubles had continued a short time they would culminate in an attack of dyspepsia. In the month of April, two years before her admission into the hospital, an erythema had appeared on the back of each of her hands. This disappeared, to return in April of the following year, with certain intestinal troubles, and on the April of the year of her admission (the case is recorded in May,) the erythema had again

appeared in the same situations, and with it a diarrhœa. This dorsal erythema of the hands usually disappeared in three or four weeks. She had never worked in the sun nor eaten any corn, diseased or otherwise; in fact, her husband had never heard of the existence of that article of food. She was brought into the hospital in a state of great excitement, so much so that she had to be confined in a strait-jacket. The erythema extended from the first phalanx, a little above the articulation over the back of the hand, to a little below the styloid apophyses, and was continued in the interdigital spaces, the palmar aspect of the hand and fingers being entirely free. At the limit of the eruption the color was of a blackish brown, and a manifest desquamation was going on there. The back of both hands presented the cracked, shrivelled appearance called by the Italians "rôti," the epidermis being very thin and as if frozen down in some places, in others the desquamation going on by large scales. Pulse 80. The condition of excitement was replaced the next day by one of stupor, which gradually became more profound, the pulse going up and the erythema disappearing until her death, on the fifth day after admission, at which time the erythema had entirely disappeared. The autopsy exhibited no appreciable lesions except a liver with a retention of bile in its parenchyma [foie gras et foie ictérique.]

In his "reflexions" upon this case, Dr. Gouguenheim quotes at length from Roussel, and shows his case to be exactly similar to what that author treats of under the name of "typhus pellagreux," or "acutisation typhoïde de la pellagre," except only that in this instance the patient had not eaten any corn.

The points of interest in the observation are that not only the ingestion of diseased corn but also the influence of insolation must be thrown out of account in searching for the cause of the disease in this case. The patient never worked in the fields, nor exposed herself much to the sun.

ART. II. *Sporadic Pellagra and Pseudo-Pellagra.* By
E. LEUDET. [Gaz. de Par., 21, 22, 26. 1867.]

ART. 12.—*On an eruption of Phlyctenæ with Remittent Fever.* By C. A. WUNDERLICH. [Archiv. der Heilkunde, 8, 2, 1867, p. 174.]

This article is in continuation of some observations printed in 1864 on five cases of a curious form of eruptive disease, which he proposed to call “remittirende Fieber mit Phlyctenideneruption.” The present paper contains two more similar cases observed by Dr. Wunderlich, and one communicated by Dr. Ladé.

The first is a patient aged twenty, who, after ten days of febrile symptoms, entered the hospital with pulse 132, respiration 40. Urine acid, scanty, containing one eighth albumen and but little of the chlorides. There were twenty or thirty roseola-like patches on the neck, many other similar ones on the thorax and down to the abdomen, and a great number sprinkled over the back. The extremities were free. The fever continued high for two weeks, at the end of which time there was a remission of the morning temperature for one week, with nightly exacerbation. This condition gradually but irregularly declined until after the patient had been about two months in the hospital, when he felt well enough to leave, the morning temperature being normal but the evening still a little high. During the patient's stay in the hospital he had pneumonia of the left lung (he came in with a bronchitis) and a little pericarditis: the former chiefly and the latter entirely after the disappearance of all disturbance of the skin. The eruption acted as follows: on the patient's admission there were found roseola-like patches on the trunk anteriorly and posteriorly, being abundant on the back and scarce on the breast. These were covered in a few days by little serous vesicles, of the size of the head of a pin, resembling in every way miliaria. Shortly vesicles appeared on the naturally colored skin between the red

spots, like sudamina. On the next day some dried up and some increased in size. New crops of roseola with vesicles continued to appear, but at first without any symmetry in their grouping. At the end of the first week, however, the erythematous spots with their vesicles assumed (first on the breast) a circular or curved shape. In the second week patches of erythema, pink and deep red, as large as the hand, appeared, covered with large vesicles, the contents of part of which were turbid. Sudamina still continued on the parts free from erythema. In the middle of the second week the old patches became livid, while new ones, all in curves, with their vesicles, appeared. Upon the hard palate there were some vesicles filled with serum. Toward the end of the second week the circular form was assumed by the eruption on the back, the isolated patches of erythema disappearing, those forming parts of circles and whole circles remaining. Gradually the vesicles became turbid. They dried up, the erythema disappeared, a desquamation took place, and at the end of three weeks from the commencement the skin appeared entirely normal. The treatment consisted in sulphuric acid and quinine.

The second case is somewhat similar, but milder, and without any complication. The subject was a serving-maid, aged twenty. The eruption first appeared on the arms, then on the face and neck, then on the lower extremities, and finally on the trunk. The remittent character of the fever was in this case also well marked. Some pigmentary coloration was left after the eruption had disappeared.

The third case is communicated by Dr. Ladé, and was called to his mind by the first paper of Dr. Wunderlich. It was an old case, which Dr. Ladé had seen while hospital assistant, and where no diagnosis had been made. He gives the case in his own words. The eruption was confined to the extremities. The pulse quotations seem to indicate a daily remittance. Dietetic treatment was alone employed, and with entire success.

ART. 13.—*Intermittent Pemphigus Circularis without Fever.* By C. A. WUNDERLICH. [Ibid., p. 184.]

In this case crops of erythematous patches, surrounded by bands of vesicles, succeeded each other at irregular intervals during fourteen years. With or without the eruption the health was perfect. A little local heat and itching, but no fever, preceded each new outbreak. The disease seemed to wear itself out, becoming always less severe and gradually retreating from the extremities. Mercurial ointment and sulphur were found most efficacious in treatment.

ART. 14.—*Treatment of Psoriasis.* By Dr. G. PASSAVANT. [Archiv. de Heilkunde, 8, 3, 1867, p. 251.]

This article is addressed to Professor Hebra, requesting him to make a further trial of the means which the author has found so efficacious.

The doctor is particularly interested in the malady, as he himself was a victim to its ravages. The remedy he proposes is simply an animal diet. He relates his case very minutely, styling it "*Psoriasis Inveterata Universalis.*" He was attacked on the elbows, at twenty, only discovering it by chance. The disease quickly spread, however, until his whole body was affected, including the nails. The itching was very violent. He had a severe catarrh and a bronchitis, which gave him no rest by day or by night, kept him constantly coughing, and was productive of only a little green mucus. His strength failed him almost wholly, his weight steadily declined, his appetite forsook him. He went through a powerful round of remedies, which he mentions, and he seems to have been very thorough in the care he gave himself. Occasionally, something would give him temporary relief, but soon afterward his case was as bad as it ever had been.

After putting himself upon an animal diet (with

hygienic adjuvants of course) in a few weeks he was well. His skin cleared up first, then his bronchitis gradually improved and disappeared, finally his catarrh, and with it some trouble he had had in his right Eustachian tube, causing constant noises in the ear, also departed. His diet, while under the ordinary treatment, had been non-stimulating, chiefly vegetable.

The conclusions arrived at by the doctor from his own case, and others which he has investigated since, are, that psoriasis is not a local malady; that it is caused by a diet in which the animal element is too small; and that, this being the case, a cure is readily effected.

He goes further, and speaks of the chronic irritation of the mucous membranes which so often accompanies psoriasis, as it did in his own case. He believes that the affection may occur internally, without any cutaneous manifestation, and that many a chronic bronchitis and nasal catarrh has no other cause than a psoriatic irritation of the mucous membrane, depending for cause upon a too vegetable diet, and removable with the removal of that cause; so also for that condition of the stomach where there are frequent vomitings of glairy mucus; and he believes that an icterus may have a psoriasis for cause in a catarrhal state of the ductus choledochus, and that this, too, may be removed by a more highly nitrogenized diet. For the other mucous membranes, he is not so certain as for those already mentioned, but he thinks it probable that they may be similarly affected.

PARASITES AND PARASITICAL DISEASES.

ART. 15.—*A New Fungus*. By TILBURY FOX. [Journ. Cutan. Med., July, 1867, p. 175.]

The discovery of the new fungus is claimed by Dr. Beigel, but Dr. Fox states that his observations were made at precisely the same time. The parasite was

found upon certain varieties of false hair. Little dark knots, of the size of pin points, are found surrounding the shaft of the hair, especially toward the point. They are difficult to detach, and embrace the hair equally in all directions. Under the microscope, the mass is found to be made up of two portions: one in the centre, composed of cells undergoing a transformation to the changed or mycelial condition, and a second, consisting of large round and oval spores. These spores are very large and have a distinct nucleus. The mass is intimately connected with the outside of the hair, which itself, however, is healthy. They seem, in many cases, to have taken their origin within the empty envelopes of the ova of pediculi. Placed in water, the cells enlarge, subdivide, get filled with granules, which move about within the cell wall, and assume a greenish tint, in fact, take on the appearance of an alga. On the outer portion, the cells on the hair seem to undergo continuous subdivision, so that there are double, triple, quadruple cells, and often a mass not unlike sarcina. The subdivisions are from 1-4000th to 1-3000th of an inch in size. They become filled with granules, which enlarge into cells. These brood cells become covered over with processes resembling cilia, move about, and subsequently discharge their contents, which, in turn, give origin to the early conditions of the fungus. In some of the large cells processes like pseudopodia are put forth.

The mycelial, or central portion of the mass, develops into a crop of chained cells, presenting appearances identical with the fructification of oidium.

The power to produce disease depends upon implantation of the early phase of the fungus upon the scalp or surface of ill-nourished young persons. Dr. Fox believes that, if this were allowed to develop, a severe form of parasitic pityriasis would result.

He believes the parasite to belong to the same class as achorion and oidium. Several representations of the fungus are embodied in the article.

ART. 16. *A Brief Description of what appear to be two newly-discovered Skin Diseases, one originating in the Dog and the other in the Cat, both Cryptogamic and Contagious, and both capable of being transmitted from the Animal to the Human Body.* By J. H. SALISBURY, M.D. [Am. Journal Medical Sciences. April, 1867. p. 379.]

Dr. Salisbury proposes to call the disease starting from the cat *Trichosis felinis*. The fungus causing the disease is developed in the fermentation of cat's milk. It appears on kittens while nursing, first around the face, afterwards spreading from there. In the human subject the disease is contracted more readily by children than adults. It spreads more rapidly over the hairy parts of the body than over the other parts. The spores of the plant attack particularly the hair follicles. The patches of diseased skin are slightly elevated, red, covered with scales and little elevations marking the positions of the hair follicles. The color is deeper and the irritation and itching more severe than in ordinary trichosis (ringworm). The hairs break off and fall out. The best remedy (among those employed) was found to be the tr. ferri chloridi, which effected a cure if thoroughly applied once.

Trichosis caninis, as Dr. Salisbury proposes to call the other eruption, that starting primarily from the dog, is a pustular disease attacking the hair follicles and the epidermis, causing the hair to fall, and spreading in concentric circles. The fungi are described by the author as being larger in this disease than in the trichosis felinis. He finds the disease in dogs, but has not yet decided whether the same original cause may not give rise to both the diseases about which he writes.

This malady requires the same treatment as the former, but more applications are necessary to effect a cure.

In the course of his investigations the doctor distributed some diseased kittens among several families,

where there were children, and in from five to ten days every child had the eruption. He produced the disease also upon himself in two instances, once by inoculation with some spores taken from a kitten, and again by spores from a child. He gives a few woodcuts representing the fungus.

TO BE CONTINUED.

Varia.

CHANGE OF PUBLISHERS.—With this number of the JOURNAL the proprietorship of Messrs. Moorhead, Bond & Co. ceases, and the JOURNAL now passes into the hands of the well-known publishers, Messrs. D. Appleton & Co., of this city. All outstanding contracts with our subscribers remain in force, and will be fulfilled. The Messrs. Appleton have also become the proprietors of the *Quarterly Journal of Psychological Medicine and Medical Jurisprudence*, and will continue its publication. The editorial charge of these Journals will remain unchanged.

A POINT OF ETHICS.—The present condition and prospects of American medical literature offer a just subject for the pride and encouragement of our profession. Translations and reprints are beginning to assume their proper numerical relations to the works written and published by our own countrymen.

The tone and standard of our profession are elevated by that competition for literary distinction which has been awakened in the great cities of our country, and has aroused the ambition of medical men throughout the land.

Such a condition of things has stimulated the medical press to unwonted activity, has augmented its num-

bers, and brightened the hopes of all who recognize its intimate associations with the best interests of our profession. The periodical medical press encourages the beginnings of medical literature, gleans from the scattered publications facts of value for the literary physician and for the hard-worked practitioner, advertises new publications, and passes judgment on their worth.

Such privileges involve corresponding responsibilities. All members of the profession are entitled to expect that each medical journal shall consent to advertise medical works written by proper men and published by houses of respectability other than that responsible for the journal in question.

The refusal of such advertisements, and their exclusion from a medical journal aiming to represent American medical literature, must show a spirit at variance with that exalted purpose which should give the tone to all medical journals, and even impair confidence in the fairness of reviews of publications of rival houses.

Such a course, we regret to say, is persevered in by the American Journal of Medical Sciences of Philadelphia. Physicians abroad may seek in vain in this widely known and representative journal, for the advertisements of works not published by Mr. Lea. All others are excluded.

How far this policy will be approved by the profession, when the facts are brought to their notice, is a question for the answer to which we shall consult our exchanges with interest.

THE O'REILLY PRIZE.—Owing to a change in the conditions of this prize, we again call the attention of our readers to the same:

Dr. John O'Reilly, of New York, having offered, through the New York Academy of Medicine, a prize of six hundred dollars for an essay on the Physiology and Pathology of the sympathetic or ganglionic nervous system, the Committee of Award, appointed by the coun-

cil of the Academy, have adopted, with the concurrence of the council the following regulations :

1. The competing essays shall be sent in to the chairman of the committee, Prof. J. C. Dalton, M.D., No. 101 East Twenty-third Street, New York, on or before the first day of March, 1869.

2. Each essay shall be marked with some distinguishing device or motto, and accompanied by a sealed envelope bearing the same device or motto, and containing the name and address of the writer.

3. The essay selected by the committee shall be transmitted by them, together with its accompanying envelope, to the council of the New York Academy of Medicine, under whose direction the envelope shall be opened and the name of the writer announced at the first meeting of the Academy in May, 1869.

4. This prize is open for universal competition.

5. The committee have a right to reject whatever does not come up to a proper standard of merit.

ALL ABOUT A MEDICAL THESIS.—Last December a thesis was presented to the Paris Academy of Medicine by a candidate, Dr. Grenier, for a diploma. The thesis was entitled, "Medico-Physiological Study of Human Free-will." Dr. Grenier requested one of the professors to accept the place of President of the Board of Examiners. When he told the professor the subject of his thesis, the professor declined, "and there is good reason to believe he informed his colleagues of his refusal." Dr. See, however, accepted, and signed the thesis, occupied the chair at the Board of Examination, allowed Dr. Grenier publicly to sustain the truth of his thesis, and declared the examination satisfactory, and granted the diploma to Dr. Grenier. In this thesis Dr. Grenier not only denied a future life and future rewards and punishments, but he denied free-will. He asserted man was an irresponsible agent, because he was not a free agent. He asserted there was no such thing as conscience; he declared man to be but an animal,

such as the beasts of the field ; and he asserted society had no right whatsoever to judge or to punish man for crimes. If there is an obscure publication in the world, if there be a pamphlet predestined to the rag-picker's basket, it is a thesis. The most pernicious doctrines may be broached in it with as much impunity as the right to assassinate our enemies may be advocated in an empty coal cellar. But some zealous person got hold of this thesis, and made so much noise about it as to attract the attention of the clergy and the government. Pressure was put upon the Minister of Public Instruction to force him to punish the professor and the student who were connected with this thesis. The minister laid the matter before the Academic Council, and requested it to annul the diploma. The Council replied it had no jurisdiction. Thereupon the minister decided he could annul the thesis, examination, and diploma, and he did annul them. He went further ; he ordered the professor to be reprimanded before the Academical Council, and record to be made of this reprimand in the notes on the professor (kept in the government archives), and on the registers of the Academy of Paris, and of the Medical School. The French Senate have postponed the debate on this question to suit the Cardinal's convenience. The discussion will be angry. M. Sainte-Beuve takes no pains to conceal that he will make a *virulent* speech on the question. I ought to add, the professors deny having made the remarks imputed to them.—*Paris Cor. American Literary Gazette.*

[Dr. Grenier has recently published this thesis which excited so great a commotion. ED. N. Y. M. J.]

COMPLETE FORWARD DISLOCATION OF THE TIBIA AND FIBULA UPON THE FEMUR.—[We are indebted to the kindness of Prof. F. H. Hamilton for the notes of the following case, which occurred in the practice of his correspondent, Dr. Charles S. Downes, of McIndoe's Falls, Caledonia county, Vermont. ED. N. Y. M. J.]

DEAR DOCTOR: Agreeable to promise made you at Washington, I send you the memoranda of a case of Complete Forward Dislocation of the Tibia and Fibula upon the Femur, treated by myself and Dr. Levi Burton.

Oct. 16, 1861, I was summoned to Washington, Vt., in consultation with Dr. Burton, of West Topsham; arrived at 11½ o'clock, p. m. On that day a. m. the patient, Mrs. Aldrich Hayward—a robust, young married woman, aged about twenty years, had been driving a young horse attached to a wagon, having an infant in her arms. The horse became unmanageable, ran; the patient was thrown from the wagon, in one of the hind wheels of which her right leg became entangled, and was seen to make three or four revolutions with it before the horse was disengaged, when the patient was found to be disabled, and was carried to a farm house near by. The infant, that she had all the time held in her arms, was unharmed.

On examination the limb was found shortened 4½ inches.

The lower articulating surface of the femur could be felt among the muscles of the calf of the leg. A large space could be felt above the heads of the tibia and fibula, which were resting upon the front of the femur, in which space the patella was discovered lying loosely with its lower edge to the front.

Treatment.—After the clothing of the patient was changed she was laid upon a bed. A strong sheet was folded corner-wise and passed between the limbs resting on the perineum, and secured to the right head-post of the bed (standing at the foot and facing the head.) The foot and ankle were bandaged. A strong towel was applied over the instep and heel, and secured under the foot, to which was attached a clothes-line, doubled several times around the opposite foot-post of the bed. A piece of hoe-handle about two feet long, was passed between the several loops of the clothes-line. All being ready, an assistant was directed to turn the hoe-

handle as one would turn an augur, thus making extension after the manner in which a woodsaw is tightened by twisting the lines. While Dr. Burton so managed the extending apparatus as to prevent any twisting of the limb, the other surgeon manipulated the limb, and reduction was effected perfectly, without difficulty, in a very short space of time: within five minutes.

After-Treatment.—Patient was directed to remain in bed with the limb supported in a nearly extended position, and kept perfectly at rest, with fomentations of water, as warm as the patient could comfortably bear, constantly applied to the injured knee. Diet, light, easily digestible food. Patient left in charge of Dr. Burton.

March 2d, 1862, I saw Mrs. Hayward at her home in Orange, Vt., and learned from her that about three weeks from the time the dislocation was reduced, she was removed to her home.

There was then very little lameness, although some swelling of the knee remained. She had been doing the housework for the family without assistance for several weeks.

June 8, 1863, saw Mrs. H. again. No disability remains, and the recovery seems perfect.

Remarks.—The patient suffered intense pain from the time of the accident until extension was made, during which, and afterward, she expressed herself as free from, or relieved from pain.

LIEBIG'S VIEWS ON FERMENTATION AND THE SOURCE OF MUSCULAR POWER.—In a session of the Bavarian Academy of Sciences, held the 10th day of May, 1868, the president, Baron Von Liebig, delivered a lecture on fermentation and the source of muscular power. It was shown that Pasteur's celebrated discovery of the increase and propagation of the yeast-fungi in a mixture of tartrate of ammonia, sugar, and yeast-ashes, rested on a palpable error. Liebig explained that according to his analyses, the chief constituent of the

yeast was a substance similar to the casein of milk, containing nearly a per cent. of sulphur, and recognizable when in decomposition, even by the unprofessional, through its odor of rotten eggs. As the materials which Pasteur employed for the growth of the yeast-fungi contained no sulphur, it follows that his assertion of the increase of the yeast-fungi, in the proportion given by him, is simply an impossibility. The proof adduced by Pasteur, viz., that the ammonia contained in his mixture disappeared, and was used for the nourishment of the fungi, is characterized by Liebig as a superficial observation. Pasteur overlooked the fact that his mixture contained soluble and insoluble phosphates, due to the yeast-ash, and that on expelling the ammonia with caustic magnesia, the well-known phosphate of ammonia and magnesia must be formed, and that hence the very means which he employed to ascertain the amount of ammonia present, rendered the solution of this question impossible. The ammonia then which disappeared had not been employed in the growth of the fungi, but simply had entered into a chemical combination whose formation Pasteur had overlooked.

It has been observed that fresh pure beer-yeast left to itself, in the presence of water, disengages carbonic acid and produces alcohol. Liebig found that the power of yeast to excite fermentation is retained as long as this process is going on; at its close putrefaction sets in. Liebig regards this process as a vital act in the interior of the cell, and as the immediate cause of the action of the yeast in fermentation. When a solution of sugar comes into contact with the yeast-cell, the inner decomposition of the latter is retarded, and the molecules of sugar in contact with the cell are decomposed. One hundred parts by weight of yeast left to themselves, furnished 9.18 parts of alcohol.

Pasteur has assumed that this alcohol is produced from the cellulose of the yeast, which had changed itself into sugar. If this assumption were true, the cellulose

ought to entirely disappear; it remains however unaltered behind.

During the formation of alcohol, no trace of ammonia is generated. As some of the most remarkable products of this vital process, Liebig mentioned leucin, and a nitrogenous substance which contains a certain amount of sulphur.

With regard to the investigations of Fick, Wislicenus, and Frankland, which have been regarded by many as a proof against Liebig's theory of the mode in which muscular power is produced, Liebig remarked that they rest upon imperfect conceptions of the nature of the organic processes involved. It was just as impossible by the combustion of a piece of dried muscle to calculate its efficiency in the living body, (the assumption of these physicists,) as it was by the combustion of a dried bee to estimate the work which it accomplishes in its flight of many hours, carrying the weight of its own body several miles.

The muscle in a living body acted like the apparatus in a watch, which gradually expends the power stored up in it: a freshly severed frog's leg represents an apparatus of this kind with an escapement, while the newly removed heart of the same animal corresponds to one without an escapement; the frog's heart beating for hours together just as in the living body, while the frog's leg moves as soon as an irritant sets it for a moment free from the escapement, and if small weights are hung on them, it is possible to obtain work from a pair of severed frog's legs; that is, the weights will again and again be alternately raised to a certain height, without blood or the supply of any kind of nutriment.

DEATH FROM CHLOROFORM.—An inquest was lately held at Liverpool on the body of Charles Rollason, forty-six years of age, mate of the ship Countess of Sefton. Deceased being unwell, went to the Northern Hospital, where chloroform was administered by Mr. Frederick Lowndes, in the presence of Drs. Bradley

and Henry Lowndes. As soon as the deceased became fully insensible it was noticed that his breathing had stopped. The usual remedies were applied, but without avail. Dr. Bradley stated that the amount of chloroform administered was less than usual, as he had examined the deceased, and suspected that his heart was fatty. A post-mortem examination showed that the deceased died of syncope. The immediate cause of death was the administration of chloroform. Verdict, "died under the influence of chloroform rightly and skilfully administered."—*British Medical Journal*.

THE FALL OF LEAVES.—M. Trécul and others have been engaged in investigating the cause of the fall of leaves, and their researches would seem to point to the conclusion, that in many plants a phenomenon occurs just before the fall of the leaf, which is not unlike the process which accompanies the shedding of horns in animals. It consists in the obstruction of the proper vessels at the base of the petiole or leaf-stalk. This obstruction is caused by the multiplication of cells, which first occurs in the parietes of the vessels. The cells increase and multiply, till at last the vessels are completely choked up in the neighborhood of the insertion of the leaf, and thus a differentiated plane is formed, across which the leaf-stalk breaks, and the leaf accordingly falls.—*Boston Journal of Chemistry*.

MOVEMENTS OF THE SENSITIVE PLANT.—M. Bert and M. de Blondeau have published in the *Comptes Rendus* some extremely interesting observations on this subject. M. Bert shows that the natural and regular movements of the leaves, which take place in the sensitive plant, are produced by a different cause from that to which the sudden contraction is due when the plant is touched by the fingers. M. de Blondeau's observations are exceedingly curious and well worth further examination. He submitted three plants to the influence of an electric current from a Ruhmkorff's coil. The first he acted on for five minutes; when left

to itself, the plant seemed prostrated, but after a quarter of an hour the leaves opened and it seemed to recover itself. The second specimen was acted on for ten minutes. The plant was prostrate for an hour, after which it slowly recovered. The third specimen was galvanized for twenty-five minutes, but it never recovered; and in twenty-four hours it had the appearance of a plant struck with lightning. A fourth plant was etherized, and then exposed to the current. Strange to say the latter had not any effect: the leaves remained straight and open; thus proving, says M. de Blondeau, that the mode of the contraction of the leaves of the sensitive plants is in some way allied to the muscular contraction of animals.—*Quarterly Journal of Science*.

ABORTION AS A CAUSE OF INSANITY.—The superintendent of the Michigan Insane Asylum says in his report just published: "Mental derangement has generally occurred as a result of local injury, and the serious impairment of general health, directly traceable to the criminal act. In a few cases it has operated directly as a moral cause, as, for instance, when the unfortunate sufferer has borne a child which has been permitted to remain with her only long enough to show the unhappy mother the priceless value of the gift she had previously refused to accept. In these cases the immediate cause of insanity is remorse. Unless this most disastrous practice be speedily arrested by the efforts now being used to suppress it, and by more stringent laws, severely punishing all parties implicated, it will materially increase the number of female patients annually presented for treatment."

TO PREVENT PITTING IN SMALL-POX.—Dr. Yates, of the Kingston (Canada) General Hospital, has been trying the following treatment for the prevention of pitting in small-pox. An ointment composed of carbolic acid dr.ii., mutton suet oz.ii., and colored with lampblack, was spread thickly upon black cotton wadding, of which a mask had been made, holes having

been cut for the eyes and nose. This mask was changed every second day, and the face gently washed with soap and warm water, and then, like the whole body, washed with water impregnated with carbolic acid. There was none of that intolerable itching, and no secondary fever; and the eruption, which had been remarkably well marked, left no trace. One of the arms treated in this manner was much less disfigured than the other, which had not been interfered with.—*Lancet*.

AN UNCOMFORTABLE SUGGESTION.—From the annual recurrence of rains, meteoric showers, and explosions of steam boilers in various parts of the country, Prof. Loomis suggests a very uncomfortable theory in regard to the safety of the earth itself. He thinks it not impossible that sufficient steam might be generated in the burning centre of the globe to blow the whole world in pieces. A volcanic eruption under the sea or near it, like that of Vesuvius now in progress, may at any moment convert the earth into a huge steam boiler, by letting the water in upon the central fires, to be followed, for aught we know, by an explosion that shall rend it apart, and send the fragments careering through space, as small planets or meteors, each bearing off some distracted member or members of the human family, to make perchance new discoveries and acquaintance in other parts of the planetary system now revolving with us. So that the final catastrophe may, after all, be only a boiler explosion on a magnificent scale of grandeur and destruction.—*Eclectic Magazine*.

PRIMITIVE CLIMATE OF THE EARTH.—The primitive atmosphere of the earth was greatly richer in carbonic acid than the present, and therefore unfit for the respiration of the warm-blooded animals. The agency of plants in purifying this atmosphere was long ago pointed out, and the great deposits of wood fuel have been derived from the decomposition of this excess of carbonic acid by the ancient vegetation. In this con-

nection the vegetation of former periods presents the phenomenon of tropical plants growing within the polar circle.

Prof. T. Sterry Hunt, considers as unsatisfactory the ingenious hypotheses proposed to account for the warmer climate of ancient times, and thinks that the true solution of the problem is to be found in the constitution of the early atmosphere, when considered in the light of Dr. Tyndall's researches on radiant heat. He has found that the presence of a few hundredths of carbonic acid gas in the atmosphere, while offering almost no obstacle to the passage of the solar rays, would suffice to prevent almost entirely the loss by radiation of obscure heat, so that the surface of the land, beneath such an atmosphere, would become like a vast orchard house, in which the conditions of climate necessary to a luxuriant vegetation would be extended even to the polar regions.—*Mechanics' Magazine*.

DR. E. S. GAILLARD, editor and proprietor of "The Richmond Medical Journal," Virginia, having resigned the Professorship of General Pathology, and Pathological Anatomy in the Medical College of Virginia, and having accepted a similar Professorship in the Kentucky School of Medicine, the journal mentioned will, hereafter, be published at Louisville, Kentucky. The title of the journal will be "The Richmond and Louisville Medical Journal."

[THE delay in the appearance of the present number of this JOURNAL has been occasioned by the negotiations incident upon the change of publishers. In future we confidently expect our issues will be prompt, and the Journal will be delivered to the subscribers by the 1st of each month. The August number, which will bear Messrs D. Appleton & Co's imprint, will necessarily be a few days late.—ED.]

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Original Communications.

ART. I.—*Hippophagy*. A Paper presented to the Suffolk District Medical Society, Boston, Mass., March, 1868. By HENRY I. BOWDITCH, M.D.

DURING my recent visit to Europe, I was requested by a professional associate in a neighboring town, to learn all that I could upon the use of horse-flesh as a food for man, and subsequently he embodied in a letter, from which I take the following extracts, the reasons for his request.

“In my morning visit to the meat-shop, I have for five years observed the poor (generally women) looking for something in the name of meat, cheap enough for them to buy. After hunting a while, they go away empty, or get a piece of bone with very little meat on it, or a salted junk, too often salted only because pre-

viciously nearly spoiled by age. Many of these customers are known to me, and as I thought of their children who really needed meat, I was often led to think whether anything could be done to provide cheaper food of the same nature.

“The horse was, of course, thought of; and then there came up the other side of the question, equally human, or at any rate, humane—namely, the welfare of the horse in his old age.

“Our main street is one of the avenues to Brighton. Once every week our eyes, our ears are distressed with the passage to and fro, driven by cruel men, of frame after frame of what were once the proud nags of rich men; and let any one go to Brighton of a market day, and he will be impressed with what must have been their worth and position in earlier days.

“What is meaner than to see a horse that has been worn out in our service, starved and abominably abused till he dies? *Old* horses—the best of them—usually end life after this fashion.

“In fact, a class of cruel, brutish men get their miserable living from work extorted from them. This item of the suffering of *old* horses I have never seen put as it should be. If these old and tortured animals can be fattened and eaten, let the humane men attend to it.

“There is a practical objection, I am told, to eating horses in this country, because they are so costly, that it would not pay to fatten, until age had destroyed their value.” . . .

The above extracts contain in embryo all the ques-

tions involved in the subject. When first proposed to me, the matter seemed trivial. As I have investigated it, it has become more important.

I propose, therefore, to discuss it chiefly under the three following heads :

First.—The history of the use of horse-flesh as food by various people in different countries. Under this division I shall present evidence

a. That in refusing to eat horses, the western, northern, and southern Europeans, and civilized North and South Americans, are an exception to the general rule of mankind over the globe.

b. That even in Europe, it was the common food of the people, and considered especially appropriate for sacred feasts and for pagan altars, long before the introduction of Christianity ;* and finally, that it has been under the pressure of necessity, used by Europeans on various occasions, not only without injury, but with absolute good to those who have partaken of it.

c. That it was priestly domination that drove hippophagism out of use among the Germans, about the sixth century of the Christian era ; and it was a love of Christianity, mingled with much worldly wisdom, that stopped its use in Iceland, four centuries later.

Second.—I shall give a brief history of the introduction again of horse-meat as food into modern Europe,

* Laing (Translation of Heims Kringlia or Chronicle of the Kings of Norway, by Snorre Sturleson, vol. i, p. 85,) says : the best established of religious practices of the Odin worshippers, was the partaking of horse-flesh at the sacred festivals, "as commemorative of their ancestors ;" and again : "hippophagism was the test of Pagan belief, as baptism is that of Christianity." Hence Saint Olaf in the eleventh century punished hippophagism with death.

under the directions of the constituted authorities of nearly all the continental powers, and especially I shall refer to the very recent use of it in Paris, and of the rapid progress of hippophagism in France, notwithstanding the various objections urged against it.

Third.—I shall have some remarks to make upon the question with reference to the necessity in Europe or America for the use of horse-meat as food.

FIRST PART.

HISTORY OF THE USE OF HORSE-FLESH AS FOOD BY THE VARIOUS NATIONS THROUGHOUT THE WORLD.

Hippocrates, in his work on diet (*Περὶ Διαιτηγῆς*) says, that it was used in his time, and that it was a “light” article of diet compared with other food, [p. 76.]*

Xenophon recites that during the Retreat of the Ten Thousand Greeks, the soldiers found in the deserts of Mesopotamia a wild ass, whose flesh was like that of deer, but of a more delicate flavor, [86.] (Xenophon-tis Scripta, Weiske’s, Leipzig, 1799, tom. 3, p. 25.)

Galen objected to it, but rather as a matter of taste than of salubrity, [76.] (De quadrupedibus: Usus in cibus.)

Pliny says, (Nat. Hist., lib. 8, ch. 69,) that Mæcenas taught the Roman epicures to use asses’ meat. It was a source of pride to Africa that she produced that species of “game,” [86.]

In Persia, according to Oelschlager (*Olearius en*

* Almost the whole of this part of the subject I have gleaned from a very learned work by Isidore Geoffroy St. Hilaire, entitled “Lettres sur les Substances Alimentaires et particulièrement sur la Viande de Cheval,” Paris: Victor Masson, 1856. 12 mo., pp. 261. The numbers in brackets refer to the pages of his work.

Moscovie, Tartarie, et Perse, Schleswig, 1647, French translation, 1656, p. 511, t. i,) and to Kerr Porter, (*Travels in Georgia, Persia, Armenia*, t. i, p. 460, 1821,) the same taste prevails, and the excellence of this food is proverbial. Quarters of the wild ass are sent as presents to friends, as haunches of venison are with us, [p. 89.]

In Africa, Marmol, (*Africa*. French translation by M. Perrot d'Ablancourt, 1667, t. i, p. 50,) states that a similar usage prevailed, and wild horses were also taken. Mungo Park, (*First Voyage in the Interior of Africa*, Castèra's translation, 1800, t. i, p. 166,) confirms this statement. [93.]

Phillips, [93,] (*Voyage en Guinée*, pp. 215 and 228, etc.; and *Histoire Générale des Voyages*, 4to, t. iv, p. 353,) asserts that in Juida, in Africa, the negroes raise up a small and very intractable species of horse solely for food.

The Moors near Tunis and Algiers, eat their own horses, mules, and asses, [94.] Monsieur Lucas, member of a scientific commission on zoology, spent many months in these places, and often partook of this food, and preferred it to beef procured there.

Herodotus states, that in Asia horses and asses were eaten from the earliest times by all classes. Horses and oxen, chamois and asses were roasted whole on birth and feast days. The custom prevails as widely now as formerly, from the extreme East to the Ural mountains. [97, 98.]

The Chinese physicians object to the use of horse-meat, and yet they give most absurd directions in re-

gard to eating it. Hence the Chinese eat all horses they can get, whether they are killed, or die of various diseases, or from old age, [98.] (Duhalde. Description de la Chine et de la Tartarie Chinoise, t. 2, p. 138.)

According to Pallas and others, the Tartars, generally the inhabitants of Russia in Asia, and even those to the north and east of Europe, formerly had this same food, [100-105.] (Pallas' Voyages, t. i, p. 376; Beauplan's Description d'Ukraine, 4to, Rouen, 1660, p. 83; Huzard, art. Cheval, Encyclopédie Methodique Dict. de Médecine, t. iv, 1792, p. 694.)

According to H. Cloquet, (Faune des Médecins, t. iv, p. 74, 1823,) the Asiatics and Mongolians of the present day use it.

The Calmucks regard horse-meat as superior to every other, [101.] Bergmann, Nomadische, Streifereien unter den Kalmüken, 12mo., Riga, 1804, 2d part, p. 76.)

In Wetteravia, (part of Germany,) according to Montgomery, the nephew of Buffon, sausages and good soup are made of the same. This writer also states that the Cossacks likewise drink the blood, after having made the horse race hard, [105.]

The line of Virgil,

“Et lac concretum cum sanguine petat equino,”

refers to this fact. Georg., lib. 3, and Horace (Ode, lib. 3, vol. iv,)

“Et letum equino sanguine Concanum,”

points to similar customs among the ancients.

Martial (de Spectaculis, 3) and Sidonius Appollina-

rius, (op. 1614. Paris. Sismondi ed., p. 318,) confirm the same in reference to the Sarmatians (the ancestors of the modern Cossacks of the Don,) and the Getans, (the predecessors of the Transylvanians, Moldavians, etc.,) along the eastern Danube of those times. In other words, there is ample proof that all these people, most of them Asiatics, and others borderers on Europe, are now or formerly were, hippophagists, [105.]

Coming now to the Celts, that Indo-Germanic people, that gradually occupied parts of France, Spain, Scotland, and Ireland, we have still more conclusive proof that they ate horse-flesh. This proof is derived from two famous edicts fulminated from Rome against hippophagy. Both are addressed to St. Boniface, the apostle of Christianity in Germany, and were intended to counteract the influence with the new converts of their former sacrifices to Odin, the memory of which was kept alive by this food, as already mentioned. Hence Gregory III. [107] (vide correspondence de St. Boniface, 1605, by Serravius,) sent his missive. The Pope wished by this interdict to show his abhorrence of all pagan worship and of things connected with the sacrifices. His holiness declared that such an hippophagic banquet was "*immundum et execrabile*," and penance was justly due for such an act. No anathemas could, however, overcome the love that the Germans had for this ancient food—"imprimis in deliciis," as Keysler calls it, (De Interdictu Carnis Equinæ Usu. Antiquates, etc., Hanover, 1720, page 321, etc.) So earnest were even the best converts against the giving it up, that

Zachary, St. Gregory's successor, sent another papal bull forbidding not only the eating of the horse, but also of the beaver and the hare. The two latter were, however, soon allowed; and only the flesh of the horse was still forbidden, because especially pagan in its associations. These various influences gradually drove the use of this food out of Europe—"magno detrimento rei familiaris," says Keyser, [109.]

Its use, however, continued for at least two or three centuries later in Iceland, and it would appear that there the love of it was so great that the priests made an exception in favor of it to some of the new converts. Perhaps there never was a more worldly-wise provision to produce conversions to Christianity than that which was made on this occasion. In the celebrated *Kristni Saga* of Iceland, (Ampere, *Literature et Voyages Allemagne et Scandinavie*, Paris, 1833, page 404,) is the following statement: Thorgeir, the lawgiver, and chief of the republic of Iceland, called all the people together, and said to them, "All the inhabitants of Iceland ought to be baptized, and to worship the same God." As to the custom of exposing infants (*exposer les enfants*), and of eating horse-flesh, these will be allowed; so also a man will be allowed to sacrifice in secret, but if any one sacrifices openly and before witnesses, he shall be banished for a certain number of years. Ampere remarks, "that this singular agreement was made in the year 1000. All the inhabitants were baptized in the warm springs of the Geyser, and some years after that there was no open and avowed pagan in Iceland," [242.]

Passing over to Oceanica, we find that Marsden, [97] (*History of Sumatra*, Parraud's edition, 1788, t. 2, p. 188,) asserts that not only it is used as food, but is considered a real delicacy there.

Similar reports come from travellers in America. Wild and domestic horses are used [94] by several of the people of South America.

For example, Azara, (*Histoire Générale du Paraguay*. French translation by Moreau Saint-Méry. 1801, t. ii, p. 302,) states that the wild horses of the Pampas furnish food to the uncivilized Indians in their wandering life, [94.]

Sir Francis B. Head, Bart., (*Rough notes taken in some rapid journeys across the Pampas and among the Andes*. John Murray, 4th edition, p. 63,) confirms the above, and draws the inference, "I sincerely believe that they, the Pampas Indians, are the finest set of men that ever existed under the circumstances in which they are placed. They are all horsemen, or rather pass their lives on horseback." *

In Brazil, many tribes use this food, [95] and Mons. Alcide d'Orbigny gives similar accounts relative to the Patagonians.

In Bolivia, the natives prefer horse-flesh to all other

* Sir Francis, alluding to their immense strength as superior to that of the civilized man, adds: "They are also very brave, and war is their occupation. They are entirely naked, yet they bear the burning heat of summer and the freezing cold of winter. . . . They have neither bread, fruit, nor vegetables, but subsist entirely on the flesh of their mares, whom they never ride. In their wars they stop for the night, and for food they kill a mare." Comparing this with civilized warfare, Sir Francis thus graphically writes of the advantage these Indians have over more civilized people. "On a long march it seldom happens that the bullocks are able to keep up with our men, whereas the food of the Pampas is flying always before him."

food, so declares Mons. Delvaille. (*Usage Alimentaire de la Viande de Cheval*, 8vo, Paris, 1856.) [95.]

In Chili the same record is given [96.] (Frezier, *Voyage de la Mer du Sud*, 4to, Paris, 1716, p. 67; and Buffon, *Histoire Naturelle*, Supp., t. iii, page 46.) They prefer the flesh of the horse to other food.

By Europeans, this food has been always used under certain exceptional circumstances, even in these latter days.

According to Huzard (vid. Parent de Chatelet's Report to Prefect of Police, entitled *Recherches et Considerations sur l'enlevement et l'emploi des chevaux morts*, 4to, Paris, 1827,) during the French Revolution a part of the meat used by the Parisians for six months, was horse-flesh, and some used it constantly. No ill effects resulted.

The famous Larrey, Napoleon's Surgeon-in-Chief, used this food in several of the hardest of his campaigns. On the Rhine, both he and his soldiers found it good. In Egypt he used camel and horse-meat, and during the siege of Alexandria, to the very greatest advantage. It became, in fact, the most powerful means of curing an epidemic scurvy. In the Austrian campaign he not only used horse-meat, but salted it with gunpowder for want of common salt. (Note 1434.)

In *Souvenirs Militaires de 1804 à 1814* (Par M. Le Duc de Fezensac, Général de Division, *Journal de la Campagne de Russie*,*) we find several statements confirmatory of the above. In the account of the terrible

* London Quarterly Review. Littell's Living Age, Nov. 23, 1867.

retreat from Moscow, he writes : " In a cold and dark night these exhausted men threw themselves down at the edge of the fir forests, and there lit their fires and roasted horse-flesh in the blaze."

M. de Bausset, the Imperial Prefect of the Palace, harlequin, as it were, of the staff, with a certain grandeur in his mean epicurean appetites, during that horrible rout, complains that even the horses of his own carriage were stolen by the soldiers for food.

Sir Robert Wilson, who was on the Russian staff during the same retreat, says : " Thousands of horses lay groaning, half dead, and with large portions of flesh cut from them to feed the famishing."

Again it is stated that at the last attack by the Russians at Wilna, " the French had still some horses remaining, for all of them had not been devoured."

In the Crimean war, the late Dr. Baudens, General Health Inspector of the army, having read St. Hilaire's work, persuaded two batteries of artillery, encamped at Baidar, to eat horse-flesh, and they were less decimated by disease than other portions of the army.

At the same time Monsieur Decroix, at present the able chief veterinary surgeon of the Paris Guard, was in the French army and stationed near a corps of English soldiers, and he assures me that the whole air of the English camp was tainted by the putrefying masses of half buried dead horses, and while the wounded soldiers were breathing this impure atmosphere, they were also nearly famished for want of food, which these carcasses would have afforded them.

In the Morocco war, at a subsequent period, his

own horse fell, apparently paralyzed, after a very long day's journey. M. Decroix felt that, instead of leaving the poor creature to starve, when the corps would move on in the morning, it would be better to kill him forthwith. Having done so, he cut off a steak. The soldiers looked on, astonished. Nevertheless, finding he appeared to relish it, others soon followed his example, and in a very short time every part of the animal was disposed of in a like manner, and apparently much to the satisfaction of the soldiers.

We have thus made nearly the whole circuit of the globe, showing the same fact existing among various and most diverse people. We have shown that the horse has been not only the aider but the food of mankind in the chief parts of the entire globe, and that in some places it is raised solely for food.

Even in Europe, it was used for a long time, and in many localities. It is so used now at the north and east, in Germany. Heretofore, we have thought that the use of horse meat was exceptional and abnormal, and found only among a few nations. Should not the terms of this proposition be reversed? The exception is with us. St. Hilaire says, "The anomaly belongs only to the most civilized nations—nations that, with all their industry and science, have been unable to produce meat enough for their own people, while at the same time they sacrifice to an absurd prejudice what they have abundantly within their own reach."

SECOND PART.

RESUMPTION OF HORSE-FLESH AS FOOD BY THE NATIONS OF MODERN EUROPE, AND UNDER GOVERNMENTAL REGULATIONS.

For the last half century it has been more or less used in Denmark.

In 1842, (*Note sur le progrès de l'Hippophagie, etc., par M. E. Decroix, 1865, page 4,*) we learn that Dr. Perner, of Munich, began to resist the prejudice against this food, and, owing to his efforts, it has been authorized and regulated by the Bavarian Government. Other German cities have followed this example.

1847, Mons. Isidore Geoffroy St. Hilaire began the discussion of the question from his Professor's chair, at the Garden of Plants. His constant declaration was, "There are millions of Frenchmen who eat no meat, and yet, every month, thousands of kilogrammes of healthy, agreeable, and very nourishing food is used for secondary purposes or actually thrown away for manure." [p. 5.] At first, he was simply ridiculed. Soon objections were urged, but they were easily met.

In 1847, it was eaten by Pastor Bodeker, at Hanover, who continued to do so for several years, as an example to his people.

In 1854, it was publicly sold at Vienna, Usage (*alimentaire de la Viande de Cheval. Par M. le Dr. Blatin, Vice Pres. Soc. Protec. des Animaux, Paris.*)

In 1857, so many were in favor of using it in Paris, that a petition was sent to the authorities for liberty to open shops for the sale of it. Though the Board of Health advised the measure, it was not allowed.

In 1860, the Medical Society at Algiers made a similar request.

In 1864, the Paris Society* for the Prevention of Cruelty to Animals made the same request of the Government, which was referred to the Minister of Agriculture, who, after consulting the Board of Health, authorized the sale.

Prizes were then offered to the first butcher who would open a shop for this object.

Meanwhile large hippophagic banquets were held in various German cities, in France and Algiers.

At Vienna, Berlin, in Wurtemberg, Bavaria, Baden, Saxony, Hanover, Schaffausen, at Lausanne, at Vilvorde, in Belgium, have arisen butchers' shops for the sale. At Vienna, during the first three years, no less than 4,725 horses afforded millions of pounds of meat.†

Finally, this last year (1867), that is, after twenty years of discussion, &c., the first shop was opened in Paris. The sale rapidly increased. The Society for the Protection of Animals, and Sisters of Charity, now daily distribute large quantities to the poor, gratuitously, collections being made to defray the expense. During the past nine months no less than eighteen shops have been opened, one recently in the very heart of Paris.

Among the most zealous of the propagandists of this food is Mons. Decroix, already alluded to, and now chief veterinary surgeon of the military of Paris. He has been called the "Parmentier of Paris," as he seems destined by his example and active zeal to force the Parisians to give up their prejudices in regard to this food, as Par-

* Decroix—cited above.

† Blatin—cited above.

mentier a century or more ago persuaded the French to use the common potato. He believes that example is the surest method of inducing people to do anything, and, therefore, he eats horse-meat frequently at his own table. Beef, mutton, and fowl, are rather exceptional articles, the horse-meat being his most frequent meat. In his intercourse with Parisians and strangers, he often invites them to dine with him upon it. It was my good fortune to be his guest on one of these occasions. The party consisted of two Parisian gentlemen, an American friend, and myself. It was a dinner party that I shall not soon forget; and, on the part of our French friends, quite full of that *piquante* vivacity found only in France. We sat from six until half-past nine p. m., and had all the varieties of bouillon, bouillie, roast, stewed, a *à la mode*; dried meat, sausages; potatoes fried in lard from the horse; and fine crispy cakes made with that instead of butter. The oil procured from the horse was pure and clear, and almost odorless as the best of olive oil. I could not have recognized any difference between the two. We closed with salad dressed with that instead of olive oil!

OBJECTIONS AGAINST ITS USE.

During all the discussions that have arisen in Europe upon this aliment, I find the following objections, which, as they will be raised everywhere that the question is mooted, I will allude to at this time. Some of them fall from their own inherent absurdity, and not one of them is really tenable, or of importance, as the following summary will show.

1st. *It is unhealthy.*—The fact of its use in most of the large cities of Europe, and that no disease has resulted, is a sufficient answer for us at the present day; but the objection was used formerly with effect in Europe. The arguments given in the previous part of the paper; the facts of the free use of horse-meat by persons when under great difficulties in revolutionary and war times; the experiments at the Veterinary School at Alfort; and the personal use of the food by various individuals, in diverse localities, in later times, are proofs positive enough for reasonable persons. The fact that we have always eaten animals of the same class; and that of all animals, none has nicer cereal or vegetable food; and that none is so careful of his food as the horse is; and that he will not take anything that is not perfectly clean; these circumstances would serve to indicate that men who can eat the flesh of the filthy hog ought not to object to that of the horse. The whole life of the hog is occupied in sucking in the vilest of juices of the excrements of men and animals, and of the refuse of decaying vegetable and animal matter. He seems born simply to make manures of offal. We have all smacked our lips over a sparerib, and yet doubt about using the flesh of horse, which, *à priori*, under the physiological laws of digestion, would seem to be a more proper aliment than that of other animals who eat a greater variety of food.

Actual examination proves the healthiness of these animals which are used at Paris, that is, where a proper inspection is made. Monsieur Hazard, (*Hipophagie, ses Rapports avec l'Hygiène Publique*, 1867,) quotes

from a letter from Mons. Pierre, Inspecteur des Abattoirs à Chevaux at Paris, in which he says, that "of 2,765 horses inspected and sold for food, not one had an appreciable amount of disease that would have proved injurious to man." The increased demand for this food proves its innocuousness. Sisters of Charity urge its use to the poor who cannot get other meat to eat. One of them told me that it seemed to her that it was borne *more easily* by the stomach than common beef, and was more nourishing also. She had seen a child who seemed in a complete state of emaciation and debility, and unable to bear common food, revive, but, finally, it recovered on the soup and meat of this animal.

Chausier (page 189, Geoffroy St. Hilaire,) in 1803, made a report in behalf of the medical faculty, and on a request from the Prefect of the Seine that the faculty would decide whether dead horses could be safely given to pigs, and he declared it was perfectly healthful food. Parent du Chatelet, (Hygiène Publique,) in 1835, answered to the same effect for the Committee on Public Health.

Second Objection.—The taste is so peculiar, say the objectors, that a prejudice will always exist against its use. In answer, one may say that if we always argued in this manner, how can we account for the general use of very many articles of food, or drink, or simple luxury, which at first are rather distasteful, and which are now nearly universal. Tobacco, and many kinds of liquors, certainly require some effort before they can be used.

But the fact is, that those who complain of the taste,

are very often those who have tasted it only *in theory*. It is very difficult even for the initiated to distinguish it from beef. The first steak I ate was the juiciest and most tender article I ever tasted. Knowing what I was eating, I thought there was a slight "gamy" flavor about it, but of that I was in doubt. The most ludicrous stories are told in Paris of the mistakes made by various individuals, and from these narratives, as well as from my own experience, I am led to believe that few, if any, persons would be able to recognize the distinction, by taste, between beef and horse-meat.*

Third Objection.—It will cost too much to fatten the horse, and we cannot raise him for food alone.

I should deny this positive assertion. Why might not the small race of horses used in certain parts of Africa—too small and indocile for labor—be acclimated, and used for food alone with us, as in their native country?

In reference to fattening the animal before killing, it may be affirmed that there is no need for so doing. The flesh is better when not fat. Generally, there is

* Among these narratives, the following is one of the most striking. A gentleman desirous of introducing an unwilling friend to the use of horse-meat, invited him to breakfast, with the understanding that a horse steak would be served up. Instead, however, of giving this, the host had a nice beef steak prepared, of which his friend very daintily partook, all the while protesting that it was tolerably good, but of that *peculiarity of taste* that would forever prevent its general use! No explanation was given, but three weeks afterward the same gentleman was invited again, and he consented, on condition that he was to have no more horse steaks. His friend replied that he would make all proper arrangements to gratify his visitor, and ordered for his breakfast a good steak from a horse. The conversation, of course, soon fell upon the previous meal, and the guest descanted on the excellence of the steak actually on the table, and of its vast superiority in taste over the former! After such a declaration, of course, a confession was made by the host, much to the astonishment of the epicure.

more oleaginous matter about all its ligatures than we find in the ox. The old animal is, moreover, nearly as good as young. The worthy pastor at Hamburg ate one thirty years old, and found it excellent.

Analogy here comes to our aid. Beef, or the flesh of older animals, is really better than veal, the flesh of the younger animal.

Still further. Were the horses used as food, doubtless many younger animals would come to the shambles, in consequence of lameness or accidents of various kinds.

Fourth Objection.—Prominent among the objectors to any innovation upon long established habits appear, with a few noble exceptions, the *savans*. This is quite in accordance with human nature as seen everywhere. But in Paris, these objectors in the Academy at first presented no argument or opposing fact, but simply reported that as horse-meat would probably never be used as aliment by any community, the discussion of the question was hardly proper for a learned body. Moreover the number of horses that would necessarily be brought to slaughter, would be so small, that this was another argument against a learned body taking action in the premises. Such arguments are too flimsy to deserve a moment's notice, and yet they were gravely used by learned men.

Fifth objection.—The use of horse meat would cause a jealousy among the butchers. This falls by its own absurd weight; for although in Vienna this was momentarily an obstruction, it was one of those impedi-

ments that only eventually urge onward the movement they undertake to impede.

Sixth objection.—Monsieur Astre, (page 170, Geoffroy St. Hilaire,) brings forward as an argument a false statement, but thinks it overwhelming in its power, namely, that man had, for millions of years, sought for everything possible as food, but had never eaten horse, except from necessity. Now in what precedes we have the history of the entire world, including even Europe until Christianity became the predominant religion, to prove the false premises of the savant. His inference of course follows it. As St. Hilaire justly says: A European savant, talking thus, would be like an Arab who, because his people forswear pork as an aliment, should declare nobody in the world ever ate it, whereas if he were to cross the Straits of Gibraltar and visit Europe, he would find thousands eating this filthy animal, and wholly neglecting his own favorite horse meat. The European savant and the wild Arab would be alike in their folly.

Seventh objection.—This is still more extraordinary, and for a political economist and lawyer to make it, as does Monsieur Molinier, of Toulouse, [172] is remarkable. The gist of his plea is this, that if horse-flesh ever came to be eaten much, the price of it would be enhanced, so that the poor would be really but little better off than before.

The fact of its use, and increase of price, would be only a reason for its having been earlier brought into use, and far from being any argument whatever against its use at all. The argument amounts to this: if we

persuade poor people to eat horse-meat, there will be soon a demand for it, the price will be increased, and the poor will be unable to get it; *ergo*, says this learned judge, it will be better to let it all go, as now, to the dogs and the hogs! The principle to which he refers is, however, acting now in Belgium. The zoological gardens at Brussels paid fifteen francs for a horse in 1853, and fifty in 1855.

Eighth Objection.—Under this title I include a variety of weapons used in opposition to hippophagy by the public press of Paris.

a. Ridicule, which is so potent in France, has been used unsparingly. Of course, it is no argument.

b. It is said, and gravely, too, by one writer, that if we begin to eat our horses, by-and-by we shall have no horses for our carriages!

c. When all the horses are killed men will kill each other, and cannibalism will be the logical sequence of hippophagy!

d. The meat is less nourishing than beef. This is wholly] denied, and the reverse of the proposition is held, by some writers, and by others who have used the food.

e. The flesh is tough. “Tough as horse-flesh” is proverbial from earliest times. But it may be questioned whether the proverb is true, and if true, whether it should prevent the poor from eating of the article provided they wished to do so.

f. It is said that only a small quantity of food can be thus gained. It would] provide one fourteenth of all the food of France. But suppose it provided much

less, what argument is that against its use? Shall we refuse a few ounces because we cannot get pounds?

g. Admitting the feasibility of using horse-flesh, still we must not oppose such a time-honored prejudice. I have nothing to say upon this. It refutes itself.

h. The horse is subject to glanders, therefore we must not eat his flesh because we may be liable to take that disease. This is overthrown by the fact, proved by Rayer, that after cooking no disease is communicated to those who eat the flesh. Besides, the same argument would hold good in regard to all other animals, as all at times are diseased. [Geoffroy St. Hilaire, 185.]

i. The horse is the companion and friend of man, and, therefore, we will never eat him.

The answer to this is the question, what usually becomes of these faithful friends in their old age, for whom we have such reverential regard that we will not eat their flesh? Are they not usually sold when they can no longer work, to some vile miscreant who will drive them at times till they drop dead in the harness? Their last hours are tortured by over-work and by whippings to keep the poor creatures in motion while a single spark of life remains. This is no fancy sketch; and it is in order to prevent this inhumanity to horses, that all the societies for the prevention of cruelty to animals in Europe, except that of England, have urged hippophagy. This fact prevents ill usage in France. A single bruise or abrasion of the skin will prevent the sale of the animal. Self-interest, therefore, now prevents inhumanity. Even devils

become benevolent or saintlike if by goodness they can gain more profit to themselves.

THIRD PART.

IS THERE ANY NECESSITY FOR USING HORSE-FLESH FOR FOOD IN EUROPE OR AMERICA ?

Supposing there were no objections to the use of horse-flesh, what proof have we that it is needed either in Europe or America? Granted everything already claimed, namely, that if we should begin anew to use this food, it would be simply a revival of an ancient, perhaps excellent, custom; and second, that there is no objection to its use, either as a matter of taste, or of health, or in any other light; what, it may be asked, is the use of fighting a prejudice that, so far as all at present alive are concerned, may be said to be born with us, and has been strengthened with each year of life? Every one shrinks from the first notion of a horse steak, or horse soup; and even a French *cuisinier* cannot make that idea palatable. What use or necessity of talking more about it?

To the necessity of having more and cheaper animal food in Europe and America, let us now address ourselves.

For the necessities of Europe, I must again refer to St. Hilaire.*

Vauban, [64,] chief engineer and warrior of Louis XIV., declared that the laboring population of France had in his day, that is, toward the end of the seven-

* Cited above.

teenth century, just about one third of the amount of food given to the cavalrymen.

Voltaire, in 1769, writes that the French peasantry rarely ate meat. A few of them have soup when ill. "They fast all the year."

La Grange, the great mathematician, in 1796, while making some investigations as to the needs of the Republic, declares that about one third less food was used by the soldiers of that day than is now deemed necessary.

Bouchardat, in 1848, remarking on Vauban's statement, says, that although France is better off at this present time than it was two centuries ago, it is still far enough removed from what is really necessary for health ; because even now, only a small proportion of laborers in France eat meat even twice a week.

St. Hilaire says, [page 31,] two hundred and fifty grammes of animal food is the daily need of a man in France, whereas he gets only about one third of that amount, [37,] and in the country, among the peasantry, only one sixth of the same amount, or even less than that : some eat it only a few times each year !

Well and truly may St. Hilaire write, (1856,) in presence of these appalling facts, at the termination of his very important work, as follows : " May this book, received by the public and by the administration, give the last blow to the absurd prejudice which I have been combating for nine years, and against which I shall contend, so long as I shall see under my own eyes the following spectacle : thousands of Frenchmen deprived of meat, or eating it only six times, twice, or

only once a year; and in the presence of this misery, thousands of kilogrammes of good meat abandoned everywhere to uses of secondary importance—given to hogs and dogs, or even thrown into the manure heaps.”

Surely here is enough proof that in France, and the same may be said generally of central Europe, more flesh food is needed. To meet this want, even partially, (one twelfth only of what is really necessary,*) horse-flesh is proposed, and the societies for the acclimation of foreign animals are now turning attention to the still further demand.

What I have thus far given indicates that, 1st, there is a real want of fresh animal food in Europe; 2nd, that there is now a determined and apparently successful effort making in Europe to supply that want, at least in part, by introducing horse-flesh for food. But a further question immediately arises, Of what use are such discussions to us in America? The people here all have enough to eat. This everybody knows without inquiry. We see meat every day on the tables of the poorest. Such are some of the off-hand statements of men whose position seems to give them a right to speak so authoritatively. I cannot deny their statements, for, personally, I know nothing on the subject. I present, however, the following data procured for me by the kindness of four† physicians connected with the Dispensary. These gentlemen were requested to ask every patient, who applied to them during a week,

* Page 50, St. Hilaire calculates that 266,000 horses and mules die annually in France.

† Drs. Langmaid, Appell, J. Homans, and Knight.

how often they or their families ate fresh meat. From the data thus furnished, I was enabled to make the following table :

No. of Persons or Families.	NUMBER OF DAYS IN THE WEEK THAT MEAT IS EATEN.		
	Very often; every day; four to five times a week.	Less than half of the time.	Not one day in a week; never; none for six weeks; every other week; every month.
133	133		
67		67	
12			12
<hr/>			
Total . 212			
Per cent.	62.73	31.59	5.68

I have only to remark that if out of 212 persons, (or families, as was, probably, really the fact,) so large a proportion as 37.26 per cent. of the whole, have meat less than half of the time, there may not be so much of fresh meat for the poor, even in this country, that we can properly reject the proffer of a greater supply and of a cheaper kind, provided it can be got without much difficulty. Moreover, that proportion, if it really represents the condition of the whole poor of this city, upsets the broad assertions given above, that the poor have enough to eat.

Some returns from the Massachusetts General Hospital, though smaller in number, were made with the greatest accuracy, and certainly apply to families.* They seem to indicate that a very large proportion, over one half, of the poor applicants at the hospital, have less fresh butcher's meat than is really needed for aver-

* Dr. H. K. Oliver.

age human health, or what is usually deemed necessary for the sustenance of average human health :

NUMBER OF DAYS IN A WEEK THAT MEAT IS EATEN.

No. of Persons.	Six or seven times a week ; and at times twice daily.	Three times a week.	Less than three times a week, or very seldom.
11	11		
7		7	
19			19
<hr/> Total, 37	<hr/>	<hr/>	<hr/>
Per cent.	29.73	18.92	51.35

Certainly, if more than 70 per cent. of the families that applied for medical assistance at the hospital during one week, had fresh meat either very seldom or less than half of the time, is it not time to ask ourselves whether the condition of the poor of our city is all that could be wished for in this Christian land ?

By nationalities, these families were divided as follows :

Irish	24
American	7
English	3
Scotch	2
Nova Scotian	1
	<hr/>
	37

In business or trades of the heads of families, they do not seem to have been from among the very poorest classes, as the following data indicate :

Laborers	6
Mechanics (active)	14
Mechanics (sedentary)	4
Sailors and Fishermen	3
Hackmen or Teamsters	3
Women	6
Doubtful	1
	<hr/>
	37

Of the laborers, and widows, and washerwomen, twelve in number, none had a full quantity, that is, a daily supply of meat. Only two had meat three times a week, and all the rest had less than that.

Finally, bringing the two series of facts from the Dispensary and Hospital into apposition, we obtain the following tabular results.

Sources of Information.	No. of Families or persons.	Meat in plenty; very often; four, five, to seven times a week.	Meat less than half the time or scarcely at all.
Boston Dispensary . . .	212	133	79
Mass. Gen. Hosp'l . . .	37	11	26
Total,	249	144	105
Per centage		57.83	42.17

These combinations make it still more evident that the poor of the city of Boston do not have all the fresh meat that is desirable. That there is a very large number of persons, who daily beg for the refuse from the markets of this city, is well known to those who have meat stalls in these markets. People would not thus beg if meat were so plenteously supplied at their tables as some visitors of the poor believe.

In confirmation likewise of the same, I am permitted to quote the opinion of one of the oldest and most intelligent and devoted of the Sisters of Charity at Boston, who assures me that her opinion agrees fully with that of my correspondent's letter, namely, that fresh meat is a rare visitor to the table of many of our poor, and that even the salt meat they get is of the most inferior kind.

More extended researches I have endeavored to make, but a single individual can do but little. I have vainly

tried to get similar statistics from New York, but thus far without success.

What ought to be done in the premises? I have tried to lay a foundation; but what we shall raise upon it in this country is still an open question. Certainly it would be better for some of the poor to eat horse-meat than to eat no fresh meat at all. Will they do so? Meanwhile, will it not be well for all thinking persons to ask themselves whether it be not simply prejudice and ignorance, that prevents the community, as a body, from using this very palatable food?

WORKS ON HIPPOPHAGY CONSULTED IN THE PREPARATION
OF THIS PAPER.

Lettres sur les Substances Alimentaires et Particulièrement sur la Viande de Cheval. Par Mons. Isidore Geoffroy Saint Hilaire, Membre de l'Institut, (Académie des Sciences,) etc. Paris. Librairie de Victor Masson. 1856. Place de l'Ecole de Médecine.

Un Banquet de Cheval. Epître aux Hippophobes. Par un Hippophage. Alger: Chez Tissier Libraire. Rue Bab-El-Gued. 1861.

Viande de Cheval. Communications faites à la Société Protectrice des Animaux. Paris: De Soye et Bouchet, Imprimeurs, 2 Place Pantheon. 1864.

1st. A pamphlet containing articles by Dr. Blatin, Vice-President, entitled "Usage Alimentaire de la Viande de Cheval."

2d. Les Préjugés contre l'Usage Alimentaire de la Viande de Cheval. Par. M. Decroix, Vétérinaire en premier de la Garde de Paris, Secrétaire-adjoint.

3d. Viande de Cheval. Lettre adressée à Monsieur le Vicomte de Valmer, Président de la Société. Par Monsieur Bourguin, Secrétaire General.

Viande de Cheval. Note sur les Progrès de l'Hippophagie en France. Lue à la Société Imperiale d'Acclimatation dans la Séance, de 13 Jan., 1865. Par M. E. Decroix, Membre de la Société. Paris: Imprimerie de E. Martinet, Rue Mignon 2. 1865.

Usage Alimentaire de la Viande de Cheval. Banquet des Hippophages. Paris: Imprimerie E. de Soye, 2 Place de Pantheon. 1865.

L'Hippophagie, ses Rapports avec l'hygiène Publique et l'économie Société suivie des principales recettes pour la Préparation de la Viande de Cheval. Par C. Hazard, Membre de la Société Protectrice des Animaux. Paris: Imprimerie Victor Goupy, Rue Garancière, 5. 1867.

Lettre au rédacteur du Belier. La Viande de Cheval et La Pomme de Terre. Rôle de la Lorraine dans ces deux initiatives.

ART. II.—*Extra-Cardiac Bellows Murmur*. By T. G. SNELLING, M.D., New York City.

DURING the last few years I have frequently met with cases of thoracic bellows murmur, inaudible over the region of the heart, but loud and clear about the apex of the left lung, which, after careful auscultation, I have found it impossible to connect with any disease of the heart, structural or dynamic. The murmur is always synchronous with the heart's impulse, rising and falling in intensity and force with inspiration and expiration respectively; growing faint at the close of expiration, but seldom becoming inaudible. It is also distinctly audible when the breath is held. The site of the murmur may vary slightly in different cases, but it is never heard lower than the middle line of the third rib, seldom so low as that.

The murmur can only be heard in its own proper locality. This site is in some instances immediately beneath the clavicle; in others again in the axillary region; in others over the first interspace or upper portion of the second costal cartilage; in others over the second interspace or over the upper portion of the third costal cartilage, at about its centre. Of course in thus localizing it its point of maximum intensity is referred to.

When heard over the clavicle or just below it, it is distinct, well marked, and clear, but not so strongly disposed to become faint during expiration as when heard lower down, and is often audible over a space of perhaps two inches in all directions, but its intensity diminishes as the ear wanders from the clavicular region.

In such instances I felt confident that the murmur arose from the subclavian artery.

When heard lower down, at the other points named, it will be seen that the first point, namely, in the first interspace or upper portion of the second costal cartilage, at about the junction of costal cartilage and rib, is just over the left upper border of the arch of the aorta, and the second point, namely, over the second costal cartilage and second interspace, even as low as the upper portion of the third costal cartilage, corresponds to the upper border of the pulmonary artery lying beneath. In these instances the conclusion seemed natural that the murmur arose in these vessels. Could the murmurs have been traced back in augmenting intensity to the pulmonic or aortic valves, it would of course have established their origin in the heart, but trials repeated again and again, failed to detect this. The occasional occurrence of the murmur below the arm-pit at the side of the chest seemed indeed inexplicable.

I noticed that in all of the cases, evidences of bad health were present. The patient looked pale, or anæmic, or feeble, and a large proportion were consumptive. In no instance do I remember having seen it in a healthy, robust person. All the cases in which I noticed it, I should probably have rejected as applicants for life insurance on other grounds besides the murmur. I think I have met with it some twenty or twenty-five times in about eleven hundred examinations of the heart and lungs.

I mentioned the subject to a number of my col-

leagues, and to other members of the profession, but to all of them it was unfamiliar; and as the authors upon the heart whom I happened to consult were silent upon the subject, I almost began to believe it an original observation of my own, when accidentally I found that it had been noticed and briefly dwelt upon by Latham, Stokes, and Hughes, in connection with diseases of the lungs, instead of the circulatory organs;* and as their observations coincide so closely with my own, I take the liberty of transcribing a portion of their remarks. It will be seen that Dr. Stokes regards it as almost pathognomic of pulmonary tuberculosis.

Latham's words are, "I must here find a place for noting a certain auscultatory phenomenon, which, though it may not have struck the general observation, is frequent and familiar to my own, and has gained an importance in my eyes from the pathological conditions with which I have found it associated. To the ear it claims kindred with endocardial murmurs; but although the heart may be instrumental in producing it, it is not at all perceived within the præcardial region, but in a certain and definite space beyond it. Fancy a line drawn from the left side of the sternum along the upper edge of the second costal cartilage, and continued an inch along the second rib; and another line drawn from the sternum along the lower edge of the third costal cartilage, and continued an inch along the third rib. Between these two lines a space is included in the whole or in part of which a murmur is often heard co-

* Dr. Flint adverts to it briefly in the last edition of his work on Diseases of the Respiratory Organs.

incident with the systole of the heart, when no such murmur is audible either in the præcardial region, or in the course of the aorta, or in the carotids, or in any part of the arterial system but here, and here only. It is a gentle bellows murmur, quite obvious to the ear, and unmistakable in its character. Of such a murmur, often audible in this situation exclusively, I am certain as a matter of fact; and certain, too, of its very remarkable accompaniments. I have witnessed it either in those who were undeniably consumptive, or in those who were too justly suspected of being so. I cannot say in what proportion of the phthisical it occurs; but I am continually meeting with it. Yet my knowledge goes no further than the living symptom. I have gained no knowledge of it by dissection; I have only a clinical experience of the matter; but it has a practical usefulness, for when from direct examination of the lung I only form a suspicion of tubercular disease, the murmur in the space indicated must always tend to confirm it."

It will be noted here, that Dr. Latham does not appear to have been aware of its existence higher up in the chest.

Dr. Hope came very near the same observation, long previously, namely, in 1839. He says, "I had a patient in the Marylebone Infirmary, in whom I, as well as the apothecary, Mr. Hutchinson, noticed a distinct murmur along the ascending aorta on some occasions, and not the slightest on others. I was much perplexed, and could not make up my mind as to the existence of valvular or aortic disease. The patient

died of phthisis, and at the autopsy it was found that the anterior edge of the left lung, completely indurated by tubercular deposit, pressed so exactly on the ascending aorta, as actually to have taken its mould, though without adhering. It was now recollected that the murmur had always been heard when she lay on her back, or inclined to the right side, but not when inclined to the left; hence we ascribed it to the pressure of the lung on the aorta, when position caused it to gravitate toward the right side."

Here again the murmur is described as of aortic origin, and no reference is made to that occurring under the clavicle.

Dr. Stokes mentions it first in speaking of disease of the lungs, and says that "the occurrence of bellows murmur at the upper portion of the left side of the chest, is one of the most interesting signs of phthisis connected with the circulatory system.* Two causes," he continues, "obviously exist for this increased action of the subclavian in phthisis; namely, the falling in of the subclavicular region and the consolidation of the lung; but I have little doubt that there is a third, namely, sympathetic irritation, something similar to the sympathy of contiguity of Hunter, for I have found that in certain cases it was distinctly remitted, its appearance coinciding with signs of pulmonary excitement and irritation. I observed it to subside after a copious hæmoptysis, and have repeatedly removed it by leeching the subclavicular or axillary regions; and the

* It may also occur in the right subclavian region, but *only there* in the *right* chest.
—SNELLING.

fact of its being often accompanied by the bellows murmur, inaudible in any other part of the circulatory system, and like the pulsation capable of being modified by the antiphlogistic treatment, leaves little doubt of the correctness of my (his) view. Under these circumstances it occurs with but little contraction or consolidation, and the bellows murmur is often exceedingly sharp, though ceasing in the brachial artery, and altogether wanting in the heart, aorta, carotid or opposite subclavian."

Dr. Hughes thinks it is heard only during inspiration, so that it coincides on the one hand with the ventricular systole, and on the other with the act of inspiration. Dr. Stokes thinks that this is an error, and my own observation would lead me to the same conclusion. It becomes more feeble during inspiration, but is not entirely lost.

Dr. Latham thinks it may arise from other causes besides tubercle, and cites as such, accumulations of any kind in the lung; thickened pleura, mediastinal tumor, or any cause producing mechanical pressure upon the pulmonary artery; (he should also have said aorta and subclavian.) Stokes thinks that although it occurs in other diseases besides phthisis, we must admit that it is more common in this than in other thoracic affections.

Dr. Stokes also says it is difficult to subscribe to the opinion of Dr. Hughes as to its mechanical origin [from pressure,] for he thinks it is often found in the earlier periods of phthisis, and it may appear and disappear within certain periods of time. He distinctly

observes that he has met with it at an early period of the disease as well as at the middle periods, and has not only seen its temporary subsidence after an attack of hæmoptysis, but also its manifest increase immediately previous to such accident. He also says that it is met with in cases of acute pleurisy of the left side, especially when attended with excitement of the heart. It is distinct from any modification of the friction sound, and consists in a systolic murmur, often broken into two parts, and sometimes intense. This murmur is most intense during inspiration, but it continues in expiration, and even when the patient holds his breath. It may wholly disappear within thirty-six hours. He concludes, "We cannot then agree with Dr. Hughes that this curious murmur is heard only during inspiration."

Tanner says that displacement of the heart, owing to the pressure of pleuritic effusion, ascites, etc., may give rise to a loud murmur in this region which does not disappear until the organ is restored to its normal position by the removal of the fluid; but such murmur is rare, for he has frequently looked for it under such circumstances, or when the heart has been pushed upward by an ovarian tumor or by pregnancy, and failed to find it.

Though some of these views appear conflicting, I think they are all really reconcilable. Dr. Hughes thinks it is only heard during inspiration, while Dr. Stokes is confident it is heard during both inspiration and expiration. Dr. Hughes is most strongly inclined to ascribe it solely to pressure, while Dr. Stokes thinks it arises from excited arterial circulation and an acceler-

ated blood current. Perhaps the difference in the *site* of the murmur dwelt upon by each respectively, may satisfactorily explain the difference. Dr. Stokes speaks of it more particularly as arising from the subclavian; Dr. Hughes speaks of it as arising from the pulmonary artery and aorta. They have obviously been attending to two distinct murmurs. Now it may readily be supposed that in large vessels like the pulmonary artery and aorta, the effect of pressure might be so slight or lost during expiration as to render the murmur almost inaudible for the moment unless very carefully listened for; while in the case of a smaller vessel, like the subclavian, the prolonged distinct murmur would naturally be heard through both inspiration and expiration, from the less resistance of its walls to compression and its smaller calibre. This accords with my own observations, for I have generally found the murmur more audible in expiration, more prolonged, and more distinct, as its site was higher in the chest. I do not see that the pressure theory of its production in most instances is in any way invalidated by the reasoning of Dr. Stokes; for while his theory of a "sympathy of continuity" is *only* theory, on the other hand the subclavian artery has been frequently found lying deeply imbedded in a channel or groove formed by it in the densely consolidated tuberculous lung.

As pressure, [or consolidation of the tissues in contact with the vessels involved,] more frequently arises from tubercular deposit than from any other cause, we are justified in regarding that as the efficient cause in a vast majority of instances, but we should also

carefully search for other evidences of disease in the subjacent parts before advancing an unequivocal opinion; namely, for pleurisy, chronically thickened pleura, tumors of the mediastinum, pleuritic effusion, ascites, ovarian tumor, or some cause competent to displace the heart.

In conclusion, it may be observed that its singular occurrence below the arm-pit may be readily explained, by supposing a portion of the pulmonary artery surrounded by solidified and hardened lung tissue.

ART. III.—*A case of Epilepsy supervening upon a Gun Shot Wound of the Cranium. Trepanning. Successful Result.* By DARWIN COLVIN, M.D., Clyde, Wayne Co., New York.

AT the battle of Gettysburg the right parietal bone of Wesley Bennett was comminuted by a minie ball. Supposing the case to be a hopeless one, nothing was done for a day or two save the removal of a few pieces of bone, when the ball was removed, it having been split in two in its long diameter. In September the patient was removed to the Mower Hospital at Philadelphia. Soon after, convulsions, epileptiform in character, made their appearance, and continued, at short intervals, until the following winter, (1863-4,) when, with two or three exceptions, they ceased entirely until January of the present year. While in the hospital, notwithstanding the earnest entreaties of the patient, no efforts were made to raise the depressed bone. He

returned home in November, 1863, and the wound healed in January following.

I was requested to see him about the 10th of May last. I found a young man about twenty-five years of age, medium height, temperament nervous, complexion slightly pale, and possessed of more than ordinary intelligence. Although I had never seen him before, I was particularly struck with what, to me, seemed abnormal, to wit: a meaningless (if I may so term it) expression of the eyes. I was more especially led to believe that their appearance was not natural, from the fact that their expression did not materially change to suit the varying character of our conversation. They reminded me of an amaurotic patient, as the pupils were more than usually dilated. Tongue was clean, pulse slow, full and soft, bowels in a soluble condition.

Although foreign to the object of this report, I will state that he informed me that during the same engagement, a minie ball passed through the right lung, and was removed by a subcutaneous operation the same day.

He complained of headache almost constantly. Appetite had since the receipt of the injury been materially impaired until quite recently; memory much impaired also. In January last, the convulsions returned with greater frequency and severity than at any time heretofore. With the exception of one interval of forty days, he had two or three convulsive seizures a week, from January, 1864, to May, 1868, when I saw him. The paroxysms would be in immediate succession,

sometimes occurring in the night, and at other times in the *latter part of the day*. His records show that *no paroxysm* occurred in the early part of the day, and more occurred in the latter part of the day than in the night, which, I believe, is the reverse of what usually obtains in epilepsy. The last series, some four days after I first saw him, and ten days previous to the operation, numbered five, being two more than he had had at any one time before. These last occupied eight hours from their outset to their close.

Another peculiarity in this case, and one which confirmed me in my diagnosis, was that the convulsions were immediately and invariably proceeded by an involuntary spasmodic movement of the left hand and fore-arm. Not yet having learned which side of the cranium had been injured, I determined that if it should result that the fracture had occurred upon the *right side*, I could not avoid coming to the conclusion that the cause of the convulsion was still there, and that it must be depressed or impressed bone. Upon examining the seat of the injury, I found a cicatrix of the scalp over the right parietal bone, between two and three inches in length, extending in a direction downward and forward crossing the coronal suture. A portion of impressed bone corresponding with nearly the whole length of the cicatrix could be distinctly felt. In the union of the parts, the scalp seemed to have dipped down and been so imbedded in the edges of the fracture as to have lost its mobility entirely. Firm pressure upon the impressed bone, or a portion of it, produced a disagreeable sensation almost amounting to pain.

Becoming convinced of the propriety of an operation, and the only procedure that could with the least propriety be suggested as a means of cure, I so advised him, at the same time assuring him that, notwithstanding the operation might, in the end, be successful in effecting a cure, still there was a possibility that he might be the victim of other seizures afterwards, although the case seemed so free from doubt, I could hardly discern how I could be justified in those fears. He readily consented, and on the 25th of May, I proceeded with the assistance of Drs. N. P. Colvin, Pomeroy, and David to raise the depressed bone.

The patient being under the influence of chloroform I made an L-shaped incision, and upon dissecting back the flap, the hæmorrhage, both arterial and venous, was so profuse as to be troublesome, and to delay the progress of the operation very much. Two vessels required the ligature, while torsion, cold, and pressure restrained the others. Much blood was lost, which subsequently we did not regret. It was found impossible to remove that portion of the scalp which was directly over the line of the fracture without cutting directly across it, it being, as I have before stated, firmly and deeply imbedded in the edges of the fracture. With this objectionable (as I at first thought) part of the procedure, I was subsequently pleased, for during the healing process, the opening afforded a ready outlet for the pus, and allowed the edges of the flap to heal promptly, which they did perfectly in six days. And I may as well state here, that were I to make another operation for depressed bone, I should try and imitate this

in that particular. The trephine was so applied as to include a portion of the impressed bone. The circle of bone was removed with much difficulty, so firm were the adhesions. A small portion of it was found to consist of a semi-osseous material, the original loss never having been fully supplied with well-organized bone. With a Hey's saw, I then removed a large piece of the same material, united with which was bone ; all of which was attended with the same difficulty of removal, in consequence of the extensive and firm adhesions.

Upon examining the dura mater, it presented a dark red and congested appearance, much thickened, its vessels turgid and enlarged. At the superior and inferior angles of the opening made, there were two spurs of bone which dipped down, as it were, to that extent that some pressure must have been constant on the brain. The greater portion, however, of the impression must have been made by the semi-osseous or cartilaginous material, for, had all the pressure been made by bone alone, death must have unavoidably occurred long since. Being unable, without great danger of wounding the dura mater, to remove the two spurs with a saw, I carefully introduced the bone forceps underneath them and, with great force, succeeded in cutting them off precisely to the liking of my assistants and myself. The parts were then critically examined ; the remaining adhesions (so far as possible) broken up, when upon consultation with those who had shared with me the toils of this tedious operation, it was determined to replace the flap and dress the wound.

After the flap was properly replaced, there remained an opening in it, about one inch in length, and from one half to three fourths of an inch in breadth, the result of cutting across it as one of the preliminary steps in the operation. The dura mater throughout this space remained in situ. Dr. Pomeroy introduced two sutures, and Dr. David completed the dressing with adhesive straps, compress saturated with tepid water, and a roller.

The patient soon rallied from the effects of the chloroform, and expressed himself as feeling well. He was put to bed, and after enjoining absolute rest and diet, we left him feeling happy and cheerful. I should not fail to speak of the great advantage derived from the use of chloroform in this case. Notwithstanding many would have objected to its use in a case of this kind, and under all the circumstances, (and I confess, at one time, I questioned its propriety,) still, I am now quite well convinced that there would have been greater danger of convulsions without than with it. The tone of the patient's nervous system was very much impaired, in fact there was well marked irritability from debility, and I think any one, to have seen him, would have feared a recurrence of the spasms ere the termination of such a long period (one hour and a half) of sawing and other manipulations without the use of such an invaluable agent.

Not being able to see him the next day, my visit was delayed till the 27th, two days after the operation. Instead of finding him complaining of pain and other evidences of a smart reaction, I learned from those who

had been constantly with him, that no perceptible exacerbation of symptoms had occurred. Not the slightest pain nor thirst had annoyed him. Pulse 84, skin ; cool and moist. One great change had taken place. I learned from his mother that on the morning after the operation, and after he had been asleep, that she, upon entering his room, at once discovered that his eyes, as she expressed it, *looked as they did before he was wounded*. The moment I saw him, (and before my attention had been called to the change by his mother,) I discovered an entire change in their expression. Instead of the dull amaurotic look, they presented a bright appearance (as the phrase is), pupils natural, in fact, there was an entire absence of the livery they wore forty-eight hours before, all of which changes plainly indicated that the brain had been suffering from *constant* pressure, and that it was then removed. From that time I had no fears of a recurrence of the convulsions. There had been one motion of the bowels, which was voluntary. Tongue clean, and appetite unimpaired. I examined the dressings but did not deem it necessary to remove them.

May 30th. Patient comfortable and has been since visit. Pulse 60, full and soft. More sensible of debility to-day, and expressed himself as desirous of rest. Appetite still unimpaired, and a more liberal diet is allowed. Dressed the wound, which is discharging freely. Bowels not in a soluble condition, and he took a little magnesia yesterday at his own suggestion, which induced a movement.

June 2d. Continues as well as at my previous visit.

Pulse 60, volume same. Slight neuralgic pains in the right orbit; not sufficient, however, to interfere with sleep. Bowels moved spontaneously. Tongue normal; appetite the same. Dressed wound, which still continues to discharge freely. Removed ligatures. Edges of the incision entirely healed. His mother says that "he is beginning to count the days, and fears he will have more convulsions." He is evidently a little more desponding to-day than usual. He says he "dreads a return of the convulsions on account of the great suffering which he undergoes for some time after they have passed off."

June 5th. Is getting along finely. Pulse 72. Appearance of the tongue and functions of the bowels and skin the same. Neuralgic pains still a little annoying, wound is looking well and discharging less. Granulations are springing up.

June 10th. Patient rapidly improving. Pulse, tongue, and condition of the bowels are the same as at last visit. Wound is discharging less than at last visit. Granulations more abundant. Neuralgic pains subsiding and but little troublesome. He is in much better spirits to-day, and I have encouraged the belief that he will have no more convulsions, for as I have heretofore stated, I had not believed he would, since the change in the visual organs twenty-four hours after the operation. Have given him permission to sit up half an hour in the morning and the same length of time in the afternoon.

June 15th. Patient met me at the door and still continues to rapidly improve. Has sat up daily from one

to four hours, since my last visit. Wound is closing rapidly. Granulations have risen nearly to the surface. Everything indicates a speedy restoration to health. He is making arrangements to go home, having for greater supposable convenience, been operated upon at the house of a relative.

July 1st. Patient may now be considered fully restored so far as constitutional symptoms are concerned. The wound, however, is not entirely closed, but nearly so. But little was necessary to be done to it to-day.

July 12th. Saw the patient at his home, some four or five miles distant from where the operation was made. Examined the head and found the wound perfectly closed. A small granulation only is remaining where, but a few weeks ago, was a large cavity, and where at each dressing, for some days, the pulsations of the brain were to be seen. He is now, to all appearances, perfectly well.

It is now fifty-seven days since the last epileptoid seizures, and forty-eight since the operation, a longer period, by seventeen days, without convulsions than has supervened since January last, and the fear of a recurrence of them has quite passed from his mind. But a few weeks ago he was gloomy and despairing, and when speaking of the operation said, "Why should I hesitate about it? You say 'tis the only means of hope, as I am now, it is only a question of time with me, and that very short. My condition is wretched indeed, Should I die from the effects of the operation, 'tis only hastening a little that result which, without it, cannot be far off." Now is everything changed; instead of

constantly indulging the horrid fear of spasms, and the consequent gloomy and irascible disposition, I find him full of happiness and joy. He says "he is the happiest man living." Unlike epileptics generally he had a double cause for his mental sufferings. The dread of sudden death, as a result of the continuance of the eclampsia, is, of itself, sufficiently horrifying, but when we add the fact that after each paroxysm, great physical suffering is to be endured, I think the two combined is mental torture concentrated.

Reviews and Bibliographical Notices.

ART. I.—*Contributions relating to the Causation and Prevention of Disease, and to Camp Diseases ; together with a Report of the Diseases, etc., among the Prisoners at Andersonville, Ga.* Edited by AUSTIN FLINT, M.D. New York: Published for the United States Sanitary Commission, by Hurd & Houghton. 1867. 8vo., pp. 667.

PURSUANT to a purpose long since annouced, the Sanitary Commission have here given us the first of a series of volumes, illustrative at once of the labors of the Commission, and the lessons learned from the circumstances of the war; lessons that would be lost to future time unless permanently recorded in some such way as this; for the knowledge, however valuable, gained by individuals must, in the ordinary course of events, soon be forgotten. We therefore feel it our duty as well as our pleasure to publicly thank the Commission, and to acknowledge the importance of the work they have undertaken, a work whose real value will be fully

recognized only at some future day, when our country becomes involved in another war of magnitude, and when the present generation, who have gained their dearly bought experience, shall have passed from the scene. The actors in that coming struggle will there find laid down for themselves a guide, a code of laws almost, to govern their movements and direct their councils, and thus spare them the humiliating and senseless confusion and ignorance in which we were unhappily involved at the opening of our great struggle.

The title of this volume sufficiently indicates its character. The labors of the editor, Dr. Flint, have been devoted to the selection and arrangement of the contributions, and the supervision of the work through the press. He has taken no part as a contributor, and is, therefore, not to be held responsible for any opinions expressed in the work. The limits imposed upon us will only permit a brief *resumé* of the contents of the volume, a fact we much regret, as the book certainly deserves a full and elaborate review.

The leading article in the first section, devoted to the Causation and Prevention of Disease, is by Professor Roberts Bartholow, on "The Various Influences affecting the Physical Endurance, the Power of Resisting Disease, etc., of the men composing the Volunteer Armies of the United States."

These are grouped into four classes.

I. The Influences in operation previous to Enlistment.

II. The Causes affecting the Physical Stamina of the Recruit subsequent to Enlistment.

III. The Causes affecting the Physical Stamina of the Soldier in Active Service; and

IV. Moral Causes, as Malingering, Desertion, Nostalgia, etc., during the whole period.

Under each of these heads, as may naturally be surmised, many subjects are discussed. The chapter almost wholly relates to questions more or less intimately with the hygiene of the soldier, and is full of

valuable information. The section devoted to malingering, is the most complete of all, and is the best handling of this question with which we are familiar, and is divided into, 1. The Cause of Malingering. 2. The Degree of Prevalence. And, 3. The Forms of Disability assumed. The Germans, in Dr. B.'s opinion, were more given to malingering than the Americans, and the Americans more than the Irish. This opinion is wholly based upon Dr. B.'s personal experience; our own observations would lead to give the undesirable credit to our own countrymen. The distinctions first suggested in the *Cyclopædia of Practical Medicine*, between feigned, exaggerated, factitious and aggravated diseases, are maintained all through the article, and are of great assistance in describing the malingerer and his maladies.

Chapter two, by Dr. A. J. Phelps, is another hygienic study, but, of course, as no two minds think alike, differing materially from the one just noticed. He goes more at length into the relations of the medical officer to his superior, and to the soldier, the embarrassment at the outset of the war from lack of trained medical officers, and the faults inherent in the original organization of the army.

In chapter three, Dr. Sanford B. Hunt treats of Army Alimentation in relation to the Causation and Prevention of Disease. This is one of the most carefully prepared and valuable portions of the work. Showing, first, the physiological requirements of the human body, which, of course, affords a standard of alimentation, the author then examines the ration furnished to our army, and proves that it is badly distributed in its component parts; that it is essentially unphilosophical and only endurable through the modifying influences of post and company funds, which, as our readers are well aware, were used for procuring articles of food not allowed by the commissary department. The chief errors are:

1. In making fat pork or bacon a substitute for fresh

beef, and thereby reducing the nitrogen of the ration below the starvation point.

2. In making salt beef a substitute for fresh beef. It is not an equivalent.

3. In making compressed vegetables a substitute for eight times their weight of starches.

4. In an excessive quantity of carbonaceous food, and deficiency of the saline elements.

5. While the variety of carbonaceous foods may not be too great, they are unduly cumulated. A system of rotation should be substituted.

“To remedy these evils,” Dr. Hunt says, “it would be necessary to make pork and bacon a supplementary instead of a substitute ration. The beef ration, varied when possible by mutton or fresh pork, being issued every day, or nearly every day, the pork ration could be reduced one half or two thirds, to four or six ounces per diem. If we are correct in assuming that 13.707 ounces of absolute carbon is an average, and 16 ounces an extreme limit of the wants of the soldier, then the carbonaceous components of the ration may be safely improved by a reduction in the starches, and the substitution for them of a small amount of fats; or better still, by a system of rotation in which, while the daily amount of carbon will be the same, the foods will be varied, and therefore more appetizing. A ration made up of twenty ounces of beef, four ounces of pork, sixteen ounces of flour, one half pound of potatoes, and two and a half ounces of beans, with eight ounces of fresh vegetables, would contain 15.169 ounces actual carbon, about 390 grains of nitrogen, and 11.55 ounces of component salts, exclusive of common salt and coffee. It would thus supply *all* the wants of the system, instead of irregularly supplying sometimes one and sometimes another element with no regard to which was most needed.”

The modifications proposed would not increase the cost of maintaining the soldier, while at the same time it would need one third less transportation than is

now demanded. This, of course, assuming that the most essential part of the ration, the beef, is compelled to transport itself, for beef on the hoof can keep up with an *ordinary* march. Dr. Hunt concludes his paper by a mention of Professor Horsford's efforts to diminish the weight and bulk of the army ration, secure economy in its administration, and at the same time furnish to the soldier all that is necessary to meet the physiological demands of the system. The only partial success which this distinguished chemist met in his endeavors to improve the army ration, will undoubtedly stimulate further study and experiment in this direction, and there can be little doubt that some day the process will be brought to practical perfection.

Chapter four contains a digest of the information received from various medical officers in answer to the questions issued by the Commission, and relates to the influence of age, period of service, season, locality, previous habits, etc., upon the diseases of the soldier. The use of warm drinks, tea and coffee, is admitted on all sides to be highly advantageous and refreshing, indeed almost essential to the comfort and well-being of the soldier; while the whiskey ration is almost unanimously condemned as useless and injurious, except when administered under judicious medical direction. Our own experience in the war, which was somewhat extensive, fully substantiates the opinions here given.

The fifth chapter is contributed by Professor Bartholow, and is devoted to a consideration of the effects of the Malarial Poison upon the Physical Endurance of the Soldier, and the Influence it Exerts upon the Diseases, and Results of Surgery. This influence is universally admitted, and yet it is difficult to separate it from the concomitant influences of the change in the mode and conditions of life, constitutional vice, or other diseases of the patient, and hence its relative importance cannot always be estimated with any great degree of accuracy. These sources of error Dr. B. has endeav-

ored to eliminate, and he gives us the following conclusions as the results of his study :

1. Malaria affects the physical endurance of men, without inducing fever, by a gradual change in the constitution of organs—the albuminoid degeneration. This acts first by impairing the primary and secondary assimilation, and thus inducing loss of power or general debility ; and second, by predisposing to the occurrence of various intercurrent diseases.

2. Upon the alterations characteristic of chronic malarial poisoning are largely dependent the diarrhœal and pulmonary maladies of the camp ; so much so, indeed, that these diseases may be considered the natural termination of the long-continued action of malaria.

3. The degeneration of organs induced by malaria, affects the results of surgery in the war by preventing the repair of fractures and other injuries, and by predisposing to pyæmia and hospital gangrene.

The concluding chapter of this section is by Dr. Harris, and takes up the subject of vaccination in the army. It is needless to say that the doctor has treated this question in his usually elaborate and complete manner, and has given us an exceedingly interesting and valuable paper. His conclusions, which are too lengthy for us to quote, may be accepted as authoritative, and as a summary of our best information regarding vaccination, both spurious and genuine.

The second section of the work opens with a chapter by Dr. E. S. Dunster, on the “ Comparative Mortality in Armies from Wounds and Diseases.” This is a purely statistical contribution, embracing a large range of material, and therefore not particularly cheerful reading. Taking the most prominent wars of the present century, and analyzing the losses therein, the author proves conclusively, what was the accepted opinion by all familiar with this subject, and yet what is quite the reverse of the popular notion, that the losses from disease are invariably greater than from wounds, the ratio ranging between 60 to 95 per cent. for dis-

ease, and 5 to 30 per cent. for wounds. In the light of these figures, the truth of Bauden's celebrated remark that, "the hospital is the true field of battle for the soldier," becomes evident. Incidentally, Dr. D. also shows that officers relatively suffer greater losses from wounds than the enlisted men, and that actually and numerically the officers lose more by wounds than disease. The infantry is also shown to be the most dangerous arm of the service, whether considered in the liability of the soldier to death from disease, or from the casualties of battle. The inexorable logic of figures also proves that so far as present experiences go, the negro is not so well adapted for the occupation of a soldier as the white man, a fact which may afford opportunity for a little calm reflection to those practical anthropologists of the present day whose practice is evidently based upon an entire ignorance of the principles of their science.

Dr. Bartholow contributes the next two chapters on "Camp Fevers" and "Camp Measles." He takes very decided exceptions to Dr. Woodward's theory of so-called typho-malarial fever, with its three sub-varieties, malarial, scorbutic, and enteric. These several forms of fever are clinically distinct, while the term typho-malarial is faulty in assuming that the typh element is simply a modifying condition, the essence of the disease being malarial. Mixed types, it is true, may occur, but the cases which cannot be assigned to their appropriate classes are few. The following propositions are a summary of Dr. Bartholow's views :

1. Camp fever consists of several distinct febrile affections: Remittent; Simple continued fever; Typhoid, with or without a malarial complication; Typhus.

2. Remittent and typhoid are clinically and pathologically distinct.

3. A malarial element may exist as a complication in typhoid fever, or more properly typhoid may occur in a person affected with chronic malarial poisoning.

4. The term typho-malarial fever, does not express the true relation of the malarial to the typh element.

5. Malarial fever and chronic malarial poisoning are clinically distinct.

6. When the typh poison is not abundant, a simple continued fever may be produced.

7. Typhoid supersedes malarial fever in malarious districts when populations become dense, and in the army when the same conditions obtain as in civil life, e. g., crowding, organic effluvia, animal debris, excreta, etc.

We doubt if Dr. B.'s reasoning will convince the reader of any impropriety in the use of the term typho-malarial. The readiness with which the term found favor, shows that it expresses a pathological condition quite distinct from the ordinary forms of typhoid and remittent fevers. The blending of these elements is no new doctrine, and Dr. Woodward has received in this respect credit to which he is not entitled, but his giving the disease a nosological status is a step in the right direction, although it may yet require much examination to fix accurately the distinctive diagnostic features of the disease.

We pass the chapter on Camp Measles with the single remark that the author from his own experiences proved, as others have done, the fallacy of Prof. Salisbury's fungus theory of the origin of this disease.

Chapter Four, by Dr. Elisha Harris, relates to "Yellow Fever, as it appeared upon the Atlantic coast, and at the South during the War." It goes over the subject of the local origin and the importation of the disease, showing pretty conclusively that both these methods of development obtained in different places. The great value of the chapter is in the teachings of the necessity of sanitary precautions, showing from the example of New Orleans and other places that this pest may be kept at bay.

Chapter Five, by Prof. Bartholow is on the "Acute Rheumatism of the Troops in New Mexico." It is a

little singular in view of the fact that 71,934 cases of acute rheumatism were reported during the first two years of the war, that this brief paper should be the only one received by the commissioner in answer to its call. This paper comprises only twelve cases, which number, however, is large in proportion to the strength of the command.

In Chapter Six, Dr. Sanford B. Hunt gives us an interesting study of "Scurvy in its Medical Aspect," examining the various theories of its causation, showing wherein these theories have been deficient, namely, in taking too limited a view of the subject, and in ascribing the disease generally to the deprivation of some single element of food, the truth being, that it is dependent on a lack of both the albuminoids and the salts, as is evidenced not alone by physiological and pathological investigation, but from the cure of the disease by the simple restoration of these elements. The practical inference from this is plain, and the necessity of directing the treatment with especial reference to the causation in each case is apparent. It would be well if every one who has to deal with large bodies of men under circumstances compelling restrictions in the choice of food, could be thoroughly acquainted with this chapter.

Dr. Hunt also contributes the next chapter on "Camp Diarrhœa and Dysentery." The influence of the special causes at work in producing these diseases is discussed at length, and the treatment which was found to answer best is given. The treatment by drugs was perhaps overestimated by many surgeons, while the happy results of change of diet, climate, etc., witnessed in the removal of these cases to the New England hospitals, point distinctly to the proper line of management. The chapter closes by extracts from the communications of medical officers giving their opinions respecting the cause and treatment of these diseases. The tendency is to fix upon some special cause as the prominent one, and to direct their attention to that. This gives us a wide range of opin-

ions frequently quite at variance with each other. Now the fact is that these gentlemen are all partially right, but they fail in taking too narrow a view of the causation of these diseases, for probably all the different influences adduced, perhaps not even excepting Prof. Salisbury's fungi, are at work consentaneously, though manifestly it is impossible to say what precise share each influence is entitled to.

Chapter Eight, by Dr. Ira Russell, is a brief but concise and interesting account of "Pneumonia among the Colored Troops at Benton Barracks." Carefully prepared statistical tables are given, showing the duration, location, (i. e. in what part of the lung,) variety, etc.; also the weight of lungs in the fatal cases. Dr. R. has found in a large series of examinations that the healthy lungs in the negro, weigh on an average four ounces less than in the white man. This may be partially explanatory of the fact which Dr. Dunster's statistics had, as we have already seen, shown to hold true in the case of the negro soldier.

Chapter Nine, by Prof. Joseph Jones, M.D., takes up the consideration of Pneumonia and Typhoid Fever as it appeared in the Confederate army. The statistics and material adduced are of great importance and show that the suffering among the Confederate troops were greater than in our army. Our limits forbid any analysis of the paper.

Chapter Ten is contributed by Dr. J. M. DaCosta, and relates to the Diseases of the Heart, observed among the soldiers, and is a peculiarly valuable study, for there was no little confusion and doubt attending the management of this class of cases, especially with reference to the question of discharge from the service. Valvular diseases were not frequent in comparison to the entire number of cardiac disorders. Undoubtedly there were hundreds who received their discharges on the somewhat indefinite ground of cardiac disease who were clearly not entitled to it.

In Chapter Twelve, we are again indebted to Dr. S.

B. Hunt for a report on "Cerebro-Spinal Meningitis." The disease was not largely prevalent in the army, and the paper is devoted to a consideration of the pathology symptoms, treatment, etc., of this curiously erratic disease.

The closing chapter of this section is by Dr. S. Weir Mitchell, on the "Diseases of Nerves resulting from Injuries," and is a continuation of the important studies, previously made by himself and Drs. Morehouse and Keen, with which our readers are already familiar, through the medium of their various monographs.* The paper is so lengthy that we can only call attention to it.

The third section in nine chapters is contributed entire by Prof. Joseph Jones, of the University of Nashville, and a surgeon in the Confederate army during the war. It is devoted to an investigation of the diseases of the Federal prisoners, in the prison camp at Andersonville, Georgia. The paper is essentially a report prepared by the author for the Surgeon-General of the Confederate army, and was never intended to be made public; but portions of it were brought out during the Wirtz trial, the parts relating to the straitened condition of the Confederate government, and its inability to provide for the needs of its prisoners, and the efforts of the medical officers in charge of the Federal prisoners to ameliorate their condition, being at that time suppressed. Now in justice to himself, and to his distressed, afflicted countrymen, he publishes it entire and without reservation, and we believe that he is thoroughly honest and candid in his statements. The already lengthy character of this notice forbids anything like an analysis of this section. It is sufficient for us to say that the author has brought to the consideration of his subject only a desire for purely scientific research, uninfluenced

*Gunshot Wounds and other Injuries of the Nerves. J. B. Lippincott & Co. 1864. Circular, No. 6, S.G.O., 1864. New York Medical Journal, February and April, 1866. American Journal Medical Science, October, 1864, July, 1865.

by any narrow minded sectional prejudices. It is a startling picture of the dreadful horrors that our soldiers endured in that pestilent prison, and it fixes, although not written with that intent, and in spite of the efforts to show that the government was powerless, the responsibility solely where it belongs, upon the neglect of the Confederate authorities in maintaining proper hygienic and sanitary surroundings for the prisoners. He shows conclusively that the frightful mortality at Andersonville was not referable to climatic causes, or to the nature of the soil or water; that malarial fevers were infrequent, typhoid was rare, and typhus was unknown; but that scurvy and its results, and bowel affections, chronic and acute, were the chief causes of death, and traces the origin of these definitively to the improper diet, undue crowding, and intolerable accumulation of filth. Nine tenths of all the deaths among the Federal prisoners at Andersonville, he says, were from scurvy, arising from sameness of food, and improper nutrition, and the deaths from the diarrhœal diseases were chiefly due to the same causes which induced the scurvy. Now nothing is more certain than that these diseases are preventible, and no possible amount of evidence as to the straitened condition of the south, and the exhaustion of its resources, can ever be admitted in justification of this blasting record. But it is simply as a scientific study of great value that we commend this paper to our readers, although it has an intense and thrilling interest for all classes. The sanitary lessons taught in it, can never be forgotten.

We disclaim entirely any personal feeling in the few remarks we have made on Prof. Jones' paper, and believe that we have in no degree misrepresented the author's position. Certainly nothing could have been further from our intentions than to convey any such erroneous view. We hope our readers will, each for themselves, form their own conclusions by a careful perusal of the article.

We have thus hastily run over the contents of this book, being desirous of giving our readers a sketch of its varied contents, rather than attempting any minute criticism thereon. It is a rich mine of information, such as cannot be found in the systematic treatises on medicine, although necessarily somewhat limited in its range. But within that range it must remain a standard of authority, on matters pertaining to the diseases of armies, and every teacher of medicine as well as every physician whose duties may call him into contact with large bodies of men, owes to the Commission a debt of gratitude for this valuable work.

ART. 2—*On Diseases of the Skin ; A System of Cutaneous Medicine.* By ERASMUS WILSON, F.R.S. Seventh American, from the sixth revised London Edition. With twenty plates and illustrations on wood. Philadelphia: Henry C. Lea. 1868. 8vo., pp. 808.

No more solid and substantial endorsement of this book can be made than the simple announcement we find on the title page, "Seventh American, from the sixth and revised London edition." This leaves absolutely nothing for the reviewer to do, beyond a mere notice of the appearance of a new edition, but our readers must not understand from this that the work is merely reprinted, a *fac simile* of the former editions; not so. The entire book has been carefully revised, and in many parts re-written, special attention being given to the addition of new methods and means in therapeutics, and that the author's opinions have not been allowed to rust and mould and to move onwards only in constantly recurring circles, coming back always to the starting point, is manifest from the kindly protest which he enters in his preface against the attacks of the critics. "If an acute and friendly critic should discover any difference between our present opinions

and those announced in former editions, we have only to observe that science and knowledge are progressive, and that we have done our best to move onward with the times." This sentiment may well be borne in mind by all whose duties lead them to pass in review the works of others.

The American publisher has very materially increased the value of this edition by adding to it the colored plates which Mr. Wilson prepared to illustrate his work on "Constitutional Syphilis and Syphilitic Eruptions." This gives a completeness to the work it never before possessed, but not even this with the other improvements in this edition were needed to make the book what it is universally conceded to be, the recognized authority on everything pertaining to Diseases of the Skin. It is an absolute necessity to any one who would intelligently undertake the management of this class of cases.

ART. 3—*Contributions to Dermatology. Eczema, Impetigo, Scabies, Ecthyma, Rupia, Lupus.* By SILAS DURKEE, M.D., Consulting Physician to the Boston City Hospital. Boston: David Clapp & Son. 1868.

This little work of seventy-six pages is a reprint from the Boston Medical and Surgical Journal, of six short essays upon the subject mentioned in the title. Although a specialist in skin diseases [of any school] would be at no loss to point out omissions, not to criticise certain statements, yet the book is certainly an excellent one. It supplies a want and must find its way to the table of many a general practitioner. The style is agreeable and no time is wasted in theorizing, nor in idle dispute about this or that classification. The ordinary manifestations of the disease under consideration are stated simply and clearly, a brief general outline of its history is given and then many of the most

prominent and reliable remedies to meet each stage are suggested. Although there is very little strictly new in the volume, yet the general practitioner may easily glean from it a bouquet of knowledge, which he would have great difficulty in gathering from the depth of an ordinary text book on skin diseases, if he succeeded at all. The remarks on treatment of scabies are excellent.

ART. 4—*The Medical Register of the City of New York and Vicinity, for the year commencing June 1st, 1868.* Vol. VI. Published under the supervision of the New York Historical Society. JOHN SHRADY, M.D., Editor. New York: Baker & Godwin, printers, 1868. 16mo. pp. 419.

With each recurring year the Register has increased its fair proportions until in the present issue it comes to us a portly little volume, beautiful to look upon, but more attractive for the complete and varied contents it serves up to us. The character of course of the book is essentially unchanged, but its scope is enlarged and like that naughty gossiping creature, made famous by the Mantuan poet, *viresque acquirit eundo*. It would be unkind indeed to criticize a work which is so purely a labor of love, so wholly unremunerative, and which is intended for the convenience of the profession at large, and therefore we content ourselves with repeating for the benefit of those of our readers who may not have seen the book, a few sentences from the editor's preface. "An amount of labor by no means inconsiderable has been expended in the endeavor to make all the statements upon authority, but despite every precaution the editor is sensible that errors, both of commission and omission may be detected without a very severe scrutiny. This warning, it is to be hoped, will be especially heeded in a work requiring so much dealing with numerals and proper names. But be this as it may,

an aim to be accurate, as demonstrated by frequent proof readings, should at least disarm the criticism that the editor has held a very enviable sinecure."

The apologetical tone with which the editor speaks of the historical portions of the book is quite uncalled for, for we feel sure that every one of his readers will thank him most cordially for giving us the pictures of the doctors of olden times, and the insertion of such collections of historical anecdotes and reminiscences only adds to the interest of the volume. We must however, as in previous years, express the hope that the issue of the Register may be more prompt, as we are unable to see the necessity of consuming two months in making the directory at the end of the work, for we take it for granted that all the rest of the volume is put to press before May 1st, the annual hegira of New Yorkers. We again extend our congratulations to Dr. Shrady and his associates, and trust they will be fully sustained in their enterprise, both by the good will and the more substantial pecuniary endorsement of the profession.

Reports on Progress of Medicine and Surgery.

PARASITES AND PARASITICAL DISEASES.

Prepared by E. L. KEYES, M.D., Physician to the Skin Department, Out-door Bureau,
Bellevue Hospital.

Continued from page 373.

ART. 17.—*Vegetable Parasites of the Human Skin.*
[Journ. Cutan. Med., July, 1867, p. 216.]

THIS article gives the most recent German views on the subject, as expressed by Kœbner, Pick, and Hal-
lier.

The majority of dermatologists believe that a given fungus produces a given disease. Hebra is of the

opinion that herpes circinatus, favus, pityriasis versicolor, etc., are all produced by one and the same parasite, the differences in the objective characteristics of the diseases being due to the stage of development of the parasite, the age of the patient, and the seat of the affection.

Dr. Pick found upon transplanting different vegetable parasites from one locality to another, that they underwent a change of character to the extent of resembling a different species, and that, with this change there occurred a corresponding alteration in the character of the resulting disease; he says:

1. When the fungus of favus, the achorion Schœnleinii is inoculated in the skin of the trunk of an individual, vesicles like those of herpes precede the foundation of the scutulum of favus. According to Kœbner the stadium herpeticum always precedes the development of favus.

2. The herpetic vesicles, in the next place, undergo a further development, so as to constitute favus, or it may be herpes tonsurans.

3. When the parasite of herpes tonsurans, the trichophyton tonsurans of Malmsten, is transplanted, it gives rise to herpes tonsurans, but occasionally produces vesicles like those of herpes preceding favus.

4. The fungus elements of favus, sometimes, when the latter is luxuriant, produce organs of fructification, which are identical with those of penicillium glaucum, and a species of aspergillus, both fungi of common mould.

5. Penicillium glaucum, transplanted on the skin produces an eruption identical with the herpes preceding favus.

6. The same fungus sometimes gives rise to favus, or the herpes which precedes it, and sometimes to herpes tonsurans.

Hallier carried on the inquiry botanically, and found, that, by sprinkling the penicillium glaucum upon various substances, such as milk, fruit, glycerine,

blood, etc., he was enabled to follow the development of the fungus. He demonstrated that in conformity with the nature of the soil and the degree of exposure to air, all the varieties which have received different names were produced ; he states :

1. *Penicillium glaucum*, the parasite constituting common mould, is met with on all vegetable matter undergoing decomposition.

2. *Achorion* is developed from *penicillium*, when the latter is sprinkled on blood, albumen, animal substance, or glycerine, and is the cause of favus, herpes tonsurans, herpes circinatus, and sometimes mentagra.

3. *Oidium albicans*, or *oidium lactis* of Fresenius, is always present in lactic acid, and in the cavities of the human body where lactic acid is present. It is possibly identical with the *leptothrix buccalis* of Remak, and forms a transition to the next variety.

4. *Leptothrix* is developed from the sporidia of the *penicillium* when mixed with a diluted fermenting fluid, such as simple water or the saliva.

5. The ferment of *leptothrix*, the commonest of the fermenting mucedinales of saccharine solutions, is met with in association with diphtheritic phenomena of the œsophagus, stomach, etc., and as a consequence of the imbibition of bad beer.

6. *Torula* originates from *penicillium* by lateral budding, and is found in the human skin, and in company with *leptothrix* in the cavities of the body.

7. The ferment of *aërosporon* is derived from the penicillate spores of *penicillium glaucum*, through the agency of oily substances, hence the chains of *trichophyton* found in the substance of the hair are supposed to owe their means of nutrition to the oily matter of that structure, and to originate in the *achorion* of favus. *Achorion* sometimes throws out penicillate processes as organs of fructification, like those of *penicillium*, and the mutual relations of *penicillium*, *achorion*, and *aërosporon* or *trichophyton* are easily traceable.

ART. 18.—*Observations to show the Identity of the Fungi of Favus and Tinea Circinata.* By J. M. PURSER. [Dub. Quart. Journ., Aug. 1867, p. 66.]

This paper seems to prove its caption by the objective characters of the diseases produced, and by the microscopical examination of the fungi, made by Dr. Tilbury Fox.

A disease looking and acting in every way like tinea circinata was contracted on the hands, arms, and shoulders by several females, from two cats living in the same house, both of whom had an eruption. Some of the crust from one of the cats was sent to Dr. Fox, who pronounced it without doubt to be the *achorion schœnleinii*—the parasite of favus.

Dr. Purser inoculated himself on the arm with some of this crust, and produced a disease with all the objective characters of tinea circinata. A specimen from this arm being sent for examination to Dr. Fox, he stated that the mycelium presented the character of *tricophyton*, rather than of *achorion*, and remarked that the disease in this case was clearly indicated by the microscope to be tinea circinata (*herpes tonsurans*.) The doctor intended to inoculate another cat from his arm, but was prevented by circumstances.

ART. 19.—*A case of Parasite of the Nail.* (*Onychomycosis*.) By Dr. J. NEUMAN. [Wien. Med. W'chn-schr't, June 29th, 1867, p. 822.]

In this case the nails of the fingers and toes fell five or six times every year. The disease had lasted twelve years. The only eruption on the body was a little eczema of a lower extremity. On examination the nails were found to be loose, not firmly attached to the matrix, and covered with yellow spots. The anterior border was very thick. The disease consists in the growth of a fungus under the nail. Two delineations of the fungus are given.

ART. 20.—*On a Variety of Impetigo contracted from Cattle.* By Dr. A. L. ADAMS. [Edinburgh Medical Journal, November, 1867, p. 422.]

This article was found among the posthumous papers of the father of Dr. Adams. It appears that there is a disease of cattle in the north of Scotland called "cany," which seems to be some variety of mange. It attacks the animals on the head and neck, extensive scabs form, which drop off. The hair falls out, and the parts affected by disease become very dry. The cattle loose flesh, but do not die. Cattle in the field escape, but, if one animal has the disease and is shut up with others, all are likely to contract it.

Human beings who attend the sick animals take the disease on the hands, face and neck, the uncovered parts. A painful tingling or itching announces the disease; the skin becomes red and covered with small pustules. The hair always falls from the diseased parts. The eruption often proves hard to remove. The treatment consists in separating the scabs by poultices and then applying a stimulating ointment.

The author states that the disease is not so contagious as scabies or ringworm, and that repeated observations have failed to discover an "acarus" in the exuviæ or parts of the skin affected, (no search seems to have been made for cryptogamia.) He is satisfied that the disease is contagious also, from man to man.

MISCELLANEOUS.

ART. 21.—*An Observation on General Depilation.* By Dr. LIÉGEN. [Gaz. des Hôp. 40, 1867, p. 484.]

The subject of these remarks was a farmer of twenty-nine years of age, of nervo-lymphatic temperament, enjoying the most perfect health of body and mind. His antecedents were irreproachable, and his one mala-

dy had been the measles when a child. Two years before the date of the article he had been involved in some pecuniary embarrassments of his brother, and starting from this point, without any other known cause, without the slightest physical affection, or the most insignificant eruption, he observed the commencement of the phenomenon of depilation.

The scalp was attacked first, and shortly he was unable to make use of a comb, even a coarse one, without combing out large masses of hair. Every morning his "bonnet de nuit" was filled with hair, and during the day they fell off over his clothes. He had what few hairs remained immediately cut as short as possible, but this did not greatly retard their fall. Hardly was baldness perceptible when the depilation of the rest of the body commenced. In less than one month, all had fallen, not a vestige of a hair could be found upon any part of the body by the most careful search, except in the axillæ, where a scattered few still existed. There was nowhere any trace of an eruption or of any furfuraceous desquamation. Little depressions on the chin marked the atrophied bulb where the hair once had been. There was no redness nor swelling of the eyelids, nor any injection of the conjunctiva. The fire of the forge and the rays of the sun made no more impression on him than formerly,

The doctor alludes to another case "observation d'un cas de suette chronique scorbutique," where the hair of the head (but of the head only) fell and reproduced itself several times. After its last fall, however, it had not started again, and he thought that there was little probability that it would be reproduced

ART. 22.—*Influence of Flannel and Scratching. Medical Rashes.* By Dr. TILBURY FOX. [Lancet, April 13, 1867, p. 454.]

Dr. Fox remarks that under the use of flannel, local

heat is intensified, and itching often increased and kept up. He gives as a practical rule "whenever you have a congestive state of the skin, or any disposition to neurosis, take off the flannel and place it, if necessary, outside the linen, this will prevent any catching cold." The diseases in which he advises this change are chiefly erythemata, roseola, urticaria, syphilodermata in their earlier stages, scabies and prurigo.

Scratching.—1. May produce an eruption, as in pruritus, it gives rise to excoriations, an artificial eczema, general enlargement and turgescence of the follicles of the skin, with perhaps abrasion of the cuticle over and above them, wheals in a nettle rash subject, ecthymatous pustules in the ill conditioned.

2. It augments and modifies existing eruptions.

3. When the disease is non-contagious, secretion, if present, may be transplanted and, when acrid, set up local inflammation. When the disease is contagious scratching is the surest mode of inoculation.

Medical rashes.—Hardy has especially mentioned an eruption produced by the inunction of mercurial ointment. It is an erythema upon which vesicles form and pour out a thinnish clear fluid. The vesicles are quickly broken, the contents desiccate, and the redness remains for a week or ten days. It is clearly a local disease and not a true eczema.

Nitrate of silver darkens the skin, the silver being deposited in the lining membranes of some of the vessels it is thought.

Arsenic.—Dr. Fox has never seen this drug give rise to eczema, (nor does he mention melasma) but has seen it cause a lichen of the face, arms, neck and hands. Erythema of the palms of the hands and of the face with puffiness of the eyes is also sometimes produced.

Iodine brings on erythema of the face. Croton-oil used in friction not unusually gives rise to an erythema of the face. Dr. Fox has seen this symmetrical and with distinct heat, lasting a few days, and this where

there could have been no direct application of the remedy to the face.

Bromide of potassium causes erythema and swelling of the nose, and when given largely, an ecthymatous eruption.

Iodide of potassium may induce purpura in predisposed subjects (no mention is made of that form of acne caused by iodide of potassium.)

Belladonna produces a rash of rosy hue, fever, dry throat and dilated pupils.

Copaiba, a rash well described by Judd, a rosy erythema of "pumiceous" aspect, as though the skin had been bitten by insects.

Arnica may produce erythema and swelling of the parts to which it is applied.

Sulphur in some cases, gives rise to a dry, red, dirty aspect of the skin, with an attempt at the formation of vesicles, perhaps an artificial eczema and subsequent pityriasis accompanied by much itching.

ART. 23.—*Notes on the Dermatology of Egypt.* By TILBURY FOX, M.D. [Medical Times and Gazette, Feb. 2, 1867. p. 111.]

This article contains some interesting remarks upon the influence of climate, habits of life, etc., upon diseases of the skin, and is the result of observations made by Mr. Fox, while on a tour through Egypt and Palestine.

Among the mixed population the Copts and Jews drink freely, while the Arabs and Turks are abstemious in this respect. Elephantiasis is common among the fish eating population, the Copts especially, and the Arabs and Turks are not so prone to ulcerative diseases as the rest of the inhabitants. The days being warm, and the nights often very cold, derangement in the functions of the skin are frequent, and there is a ten-

dency to inflammation of an erysipelatous character. The diet of the people is chiefly vegetable, on the whole non-stimulating, Jews and Copts excepted, and Dr. Fox remarks "I cannot but believe that the preponderance of the vegetable, as compared with the animal elements in the food has something tangible to do with the prevention of cutaneous mischief." Scrofula is not severe, nor is the ulcerative type of disease common in Egypt. Scarlatina abounds, especially in Cairo, although it is said to be never fatal there. The exanthemata generally prevail. Urticaria troubles Europeans greatly, especially those who travel far into the country and are obliged to live upon potted provisions, especially fish. The most common disease of the skin is eczema. Chronic eczema is observed upon those who eat meat, especially if salted, and who drink spirituous liquors. Herpes zoster is common, as is also acute pemphigus, which latter attacks children, even at the breast. Congenital pemphigus is absent, or at least very rare. Syphilis has never been prevalent nor severe in Egypt. Impetiginous eruptions are universal upon children at the breast, and prurigo constant in the lower orders, probably on account of dirtiness and vermin. Among the dark colored races, before any eruptive manifestation appears, the skin becomes exceedingly dry and as if covered by a powdery substance apparently in a crystalline state, supposed to be fatty and epithelial matter. Lichen tropicus is frequently seen against it. Nile water and Nile mud (which is alkaline) are used, and a very popular remedy is the water melon, the inside of which is rubbed upon the skin. Pityriasis is common; ichthyosis rare. Psoriasis and lepra appear to be altogether independent of the syphilitic virus, as they existed in abundance, before syphilis was known there.

ART. 24.—*On a New Method of Employment of the Iodo-chloride of Mercury, (Sel de Boutigny) in the Treatment of the Varieties of Couperose.* By Dr. DIVERGIE, [Bull de Thér, 1867.]

The difficulties which attend the treatment of the different varieties of acne and couperose are mentioned by Dr. Divergie. In their treatment, at the head of local modifiers, he places the iodo-chloride of mercury, the so-called sel de Boutigny, and especially that preparation of it which is ordinarily employed under the name of “pommade Rochard.”

During the use of this ointment however, the patient has to be kept isolated from the world, on account of the inflammation it excites and the consequent disfiguration. The use of the ointment moreover cannot be entrusted to patients themselves, as they abuse it. Dr. Divergie consequently employs, and with apparent good results, the iodo-chloride in another form, so that the patients, of whom he says “ninety-nine out of every one hundred are ladies or young persons,” can make use of the treatment and yet not be obliged to avoid society. His formula is as follows:

Iodo-chloride of mercury, gr.cxii: iodide of potassium, dr.i; Water and glycerine, of each, dr.i.

He directs the iodide and iodo-chloride to be well rubbed together, and the water to be added drop by drop. Afterward the glycerine is put in and the mixture is ready for use. This is a saturated solution. He never commences with it, but begins with about one fourth that amount of iodo-chloride and gradually works up, as the irritability of the skin will allow. It is simply painted on with a brush and allowed to stay for three hours in the morning, then it is easily removed with a sponge and a little water, and the inflammation it has excited will subside in three quarters of an hour. To obtain an effect equal to that of the “pommade Rochard” it is only necessary to apply he

solution in the night on retiring and not to wash it off until the following morning.

ART. 25.—*On the Application of Pulverized Ether to Epilation.* [Bull. de Thér. June 30th, 1867, p. 565.]

M. Horand, in the Medical Journal of Lyons, published an article on pulverized ether, part of which forms the subject of the present communication. The heading explains the article. It had been used with success without the addition of any other means in a few cases, and one epilation had proved all sufficient. The question naturally arises, how much influence the ether had as a parasiticide? The hair must be cut short so that the pulverized ether can penetrate, and a white color of the skin shows that anæsthesia is produced, and that epilation can be carried on without pain. Little spots are made insensible and epilated successively. No inflammatory action follows.

RECENT PUBLICATIONS.

- Contributions to Dermatology. On the non-identity of the Parasites met with in Favus, Tinea Tonsurans, and Pityriasis Versicolor, including proofs derived from the occurrence of these diseases amongst the lower animals, and their transmission from them to man. By M'Call Anderson, 1866, Glasgow.
- A. Hardy and A. de Montméjà. Clinique Photographique de l'Hôpital, St. Louis. Paris, 1867.
- Daude (de Marvejols.) Traité de l'erysipèle épidémique. Paris, 1867.
- Du traitement des maladies de la peau par les Eaux sulfureuses de Barèges. M. E. Le Bret, M.D., Paris, 1867.
- Traitement de l'eczéma par les Eaux minérales, et spécialement par les Eaux de St. Gervaise, Dr. A. Billout, Paris, 1867.
- A practical treatise upon Eczema, including its lichenous and impetiginous forms. M'Call Anderson, London, 1867.
- De l'herpétisme. Dr. T. Crignot, Bordeaux, 1867.
- The Dartrous Diathesis or Eczema and its allied affections. By A. Hardy. Translated by Dr. H. G. Piffard, New York, 1868.

Varia.

HOMŒOPATHY IN THE UNIVERSITY OF MICHIGAN.—In consequence of an Act of the Legislature of Michigan at its last session, granting aid to the University on the condition that a professor of homœopathy should be introduced into the Medical Department, much agitation and annoyance have been experienced by its friends; but the Faculty are now happy to announce to the Medical Profession and all the friends of legitimate medicine, that the Board of Regents, who control the University, at a recent meeting resolved, with but a single dissenting vote, that under no circumstances should such professor be introduced into the Medical College at Ann Arbor; and the Supreme Court of the State having since decided that all previous action of the Board making provision for the establishment of a school of homœopathy at another place, is not in compliance with the law, and such action thus becoming null and void, the Faculty are enabled to assure the profession that the Medical Department of the University of Michigan is entirely free from the remotest connection with homœopathy—that its curriculum will not be changed, and that it will remain as heretofore unaffected by any form of irregular teaching or practice.

HOW TO POISON CHILDREN.—One naturally touches the point of his pen with great timidity at a reputation like that of the illustrious Liebig. But the learned professor, since his stay at Paris in attendance on the exhibition, has promulgated in the journals of science new food for children, which he declares is being fed with success to thousands of children in Germany; or, to use his own expression: “*A des petits tudesques par milliers.*” This food is a chemical compound intended to contain the component parts of human milk, and to be a substitute for it. To accomplish this object, that is to say, to furnish to new-born children deprived for

any reason of their natural food a substitute, he went to work and reproduced a milk by chemistry, which, chemically speaking, was correct, and which, he contends, children may take with perfect safety and advantage.

With such an authority as that of Liebig, therefore, the whole scientific world of Europe has been trying this new compound; for, to find a substitute for mother's milk, especially for the use of the foundling hospitals, is an immense desideratum. But here at Paris it was tried on but four children, and these four it killed—two in three days, and two in four days. The experiment was made at the Lying-in-Hospital by Dr. Depaul, professor of clinical obstetrics of the faculty of Paris, and the children selected were those abandoned by their mothers. The artificial milk quickly brought on bilious purging and prostration. Of course, Prof. Liebig declaims loudly against the fairness of the experiment; but Dr. Depaul is a competent judge, and the whole Academy of Medicine, after a fair report from the chemists in their body have decided not to take the responsibility of a further experimentation with so dangerous a compound. What is the use, the Academy judiciously says, since we have in our hands so excellent a substitute, and so nearly an analogous substance, in cow's milk with the addition of a little water and sugar? And upon this substance, which is so easily obtainable, the Academy has decided to rely for the feeding of the foundlings and all other children placed in their charge. Prof. Liebig has undoubtedly lost a point in this discussion.—(*Paris Cor. Times.*)

NEW MEDICAL JOURNALS.—We have received the first number of the California Medical Gazette, published by A. Roman & Co., of San Francisco. The editor's name does not appear. The Gazette opens up bravely—if it keeps its standard as high as in its initial number, we predict for it a success it well deserves. The original communications are very able,

while the selections and editorial comments are made with great discretion and judgment. In his salutatory, the editor avows his determination to make the Gazette an independent medical journal—his only motive, and his full confession of faith—*a desire to advance medical science*. Cordially approving of this, the only true principle for the conduct of a medical journal, we extend to him most hearty wishes for his success in his enterprise.

Drs. Warren and Chancellor of the Washington University of Baltimore, announce a new medical journal, under the title of The Baltimore Journal of Medicine and Surgery. It is to be issued on the 1st of October next, and is as we understand it especially intended as an organ of southern medical experiences during the late war.

FOREIGN MEDICAL JOURNALS.—Messrs. Kelly and Piet of Baltimore, announce that they have made an arrangement with the proprietors of the London Lancet, for furnishing an edition of that journal to American subscribers. The price is to be twelve dollars a year in currency, much less than it can be imported for by the subscriber himself. They also purpose giving in addition original communications from the leading physicians of the United States; an odd conjunction, it seems to us, and one that will probably prove neither particularly complimentary to our English friends, nor advantageous in any degree to our own writers.

NEW YORK, JUNE 8, 1868.

Editors Medical Journal:—In a little brochure on “Bone and Nerve Surgery,” which I published in 1866, will be found the following case, in which five inches of the median nerve were taken out, without impairing the sensibility of the parts to which it was distributed. It might be interesting to some of your readers to republish my case, in connection with a similar one republished in the last number of the New

York Medical Journal from the London Lancet, November 30, 1867. The latter case has been frequently referred to by the medical journals of this country and Europe.

I would remark that there could be no possible doubt about the entire removal of five inches of the trunk of the nerve in my case. Dr. Henderson, who was present at the operation, was connected with one or two of the London hospitals, brought strong letters of recommendation from Mr. Paget and other London surgeons, and is a good anatomist.

Very respectfully, yours, etc.,

J. C. NOTT.

“The subject of this case, Mr. Wysinger, aged about fifty, of robust constitution, lives at the little village of Citronelle, thirty miles above Mobile.

“He came to consult me about twelve months ago for a tumor, which had been growing for fifteen years on the front of his forearm; it had never interfered with the functions of the hand or arm, and had never given the slightest pain or inconvenience until two or three months before consulting me, when it commenced giving him a good deal of pain in the fingers, and produced partial contraction of the little and ring fingers.

“The tumor was about the size of a cocoanut, oblong or egg-shaped, and extended from an inch below the bend of the arm to within an inch of the wrist; it was elastic, and presented the characteristics of an encysted tumor.

“He readily consented to its extirpation, and in the presence of Dr. Henderson, Dr. M'Cleskey, and several younger members of the profession, I made an incision its whole length along a line drawn from the tendon of the biceps muscle to the centre of the wrist. On dissecting down carefully, I discovered, to my surprise, that it was a neuromatous encysted tumor. At its upper part the trunk of the median nerve was seen to enter it, and immediately to expand its fibres widely

over the whole anterior surface of the sac ; at the lower border of the tumor they were again collected into a common trunk. The expanded fibres were so completely incorporated with the sac that it was impossible to liberate them from it by dissection. I therefore divided the nerve above and below the tumor and dissected out the entire mass. The adhesions were slight and there was no difficulty in turning out the sac, which had been punctured and partially evacuated. It is remarkable that the contents of the sac presented the appearance simply of grumous blood, though of fifteen years' standing. Vidal de Cassis, in his *Pathologie Externe*, reports a case very similar in every respect, the only one I know on record.

"Though interesting pathologically, I have reported this case simply on account of its physiological bearing. Although at least five inches of the median nerve were removed, its functions were not interfered with in the slightest degree. The operation was followed by neither paralysis nor loss of motion, and the neuralgic pains, which had occurred two or three months previously to the operation, disappeared entirely. I have been in the habit of meeting this gentleman frequently during the twelve months which have followed the operation, and he assures me all the functions of the fingers are perfect.

"The tumor had been growing slowly for fifteen years, and as the function of the median nerve was probably gradually destroyed, nature made provision to supply its place ; but *how* it was done, I must leave to wiser heads than mine to explain."

PROFESSORS MULLER AND EISENSTUCK, of the Royal Agricultural Academy of Sweden, made analyses of the mixed milk of fifteen cows, (five Ayrshire, five Pembrokehire, and five Swedish cows,) which were highly fed and milked four times a day at regular hours.

These analyses, extending throughout the whole year, gave the following results :

Fat (butter).....	4.05
Albuminoids (caseine, etc.).....	3.32
Sugar of milk	4.71
Ash	0.73
Water	87.19
	<hr/>
	100.00

The lowest percentage of water was 85.92 ; the highest, 88.35. The composition of the milk varied but little during the year, whatever the changes in temperature or the weather.—*Boston Journal of Chemistry*.

THE ETHER MONUMENT IN BOSTON.—This monument (see this Journal, July, 1867,) has just been completed and formally delivered to the city authorities, by Prof. Henry J. Bigelow, in the name of the donor. The following description of the monument we excerpt from our valued exchange, the *Boston Medical and Surgical Journal*.

The form of the monument is suggested by mediæval types, modified by the nature of the white Concord granite used in its construction. It is about thirty feet in height, and arises from a square basin. Its base is cubical, leaving on each vertical face a niche containing a spouting lion's head, with sculptured water lilies and other aquatic plants. Upon this base or plinth rests a surbase, adorned with mouldings, from which arises a die, bearing upon each of its four sides an inscription, surmounted by a bas-relief in marble. These are sunk in the tympana of four pointed and cuspidated arches, supported each by two stunted shafts of Gloucester red granite, the capitals of which are enriched by poppies and oak leaves, this decoration being carried around the monument on the same level in a band or string course.

These arches form a canopy, square in plan, from which the structure diminishes by a series of mouldings to the base of a grouped quadripartite shelf of polished red granite. Its capital, which is decorated with oak leaves, bears on its abacus a group setting forth the story of "the good Samaritan," the type of the relief of suffering.

The inscriptions and bas-reliefs on the four sides are successively as follows :

I.

To commemorate
the discovery
that the inhalation of ether
causes insensibility to pain.
First proved to the world
at the Mass. General Hospital
in Boston,
October, A.D. MDCCCXLVI.

The bas-relief accompanying this, represents a surgical operation in a civic hospital, the patient being under the influence of ether.

II.

Neither shall there be any more pain. [Revelation.
With an allegorical bas-relief of the angel of mercy descending to relieve suffering humanity.

III.

In gratitude
for the relief
of human suffering
by the inhalation of ether,
a citizen of Boston
has erected
this monument
A.D. MDCCCLXVII.

With a bas-relief of a field hospital, with a wounded soldier in the hands of the surgeons.

IV.

This also cometh forth
from the Lord of Hosts
which is wonderful
in counsel
and excellent
in working

[Isaiah.

The bas-relief accompanying this inscription is an allegory of the triumph of science.

THE PUBLICATION OF THE MEDICAL AND SURGICAL HISTORY OF THE WAR.—Our readers will be interested in the following Report, submitted July 22, 1868, to the Senate of the United States, by the Hon. Lyman Trumbull, Chairman of the Judiciary Committee.

The Committee on the Judiciary, to whom was referred a communication of the Secretary of War in regard to the condition of the appropriation of \$60,000, made July 28, 1866, for the preparation and publication of 5,000 copies of the first volume of the Medical and Surgical History of the Rebellion, compiled by the Surgeon General, and a like number of copies of the Medical Statistics of the Provost Marshal General's Bureau, compiled and to be completed by Surgeon J. H. Baxter, beg leave to report :

That it appears from a report of the Surgeon General, accompanying the communication of the Secretary of War, that there has been disbursed, on account of the Medical and Surgical History, \$34,417.91, and on account of the Medical Statistics of the Provost Marshal General's Bureau, \$5,845.33, leaving \$19,736.76 of the appropriation unexpended.

June 8, 1868, the following law was passed :

That of the appropriation of sixty thousand dollars for publishing the Medical and Surgical History of the

Rebellion and the Medical Statistics of the Provost Marshal General's office, made in act approved July twenty-eighth, eighteen hundred and sixty-six, thirty thousand dollars shall be devoted to the preparation and publication of five thousand copies of the Medical Statistics of the Provost Marshal General's bureau, and that the work shall be compiled and completed by Assistant Medical Purveyor J. H. Baxter, under the immediate direction of the Secretary of War, and without the interference of any other officer.

Approved June 8, 1868.

The Surgeon General's report shows that since the passage of the foregoing act, there has been paid out on account of the Medical and Surgical History of the Rebellion \$1,741.75. Your committee cannot but regard the disbursement of this sum upon that work, after the passage of the act of June 8, 1868, and when less than \$30,000 of the sum appropriated remained to be disbursed as required by that act, *as a palpable violation of law*, and they submit the following resolution, and recommend its passage:

Resolved, That under existing laws the balance of the appropriation of sixty thousand dollars made July 28, 1866, for the preparation, under the direction of the Secretary of War, of five thousand copies of the first volume of the Medical and Surgical History of the Rebellion, compiled by the Surgeon General, and the preparation and publication of a like number of the Medical Statistics of the Provost Marshal General's bureau, compiled and to be compiled by Surgeon J. H. Baxter, to wit, the sum of \$19,736, must be applied exclusively to the latter work.

MEDICINE: An Inquiry (from a philosophical point of view) concerning its true value in the Treatment of Disease. [Extract from an address by Mr. W. Wil-

mott to the Chemist's Assistants' Association, May 14, 1868.]

“If we say that a large majority of the medical profession believe in the efficacy, to a greater or less extent, of the drugs they prescribe, we shall not be far wrong. Such a belief has always existed; but it is clear that it presented a very different aspect formerly to that which it presents now. The history of medicine, in fact, reveals to us a strange complication of credulity and superstition. One feature connected with it is singularly noticeable. From the earliest ages down to the present time, there has been an intense desire, with a view either to wealth or fame, to discover one remedy or one law, which shall prove of universal application. Sometimes a fancied discovery of this kind is called a “doctrine,” such as the “Doctrine of Signatures,” and the “Doctrine of *Similia Similibus Curantur*.” Sometimes it is called a “method,” such as the “Expectant Method,” much in favor, as we have seen, at the present time. Sometimes it is called a “treatment,” such as the “Antiseptic Treatment,” the “Chrono-thermal Treatment,” and the “Eclectic Treatment;” and sometimes it is called a “cure,” such as the “Water Cure,” the “Movement Cure,” and the “Great Sulphur Cure.” All these, or the majority of them (true, perhaps, to a limited extent, and, because true, so far successful,) have failed, and always will fail, when indiscriminately or universally applied. No discovery of this kind can or will ever be made, simply because there is no such remedy or law to discover. Disease, like every other phenomenon, is subject to an infinity of laws—if, indeed, they are laws at all, which must be met according to the form and direction which, in each case, they may have assumed. This is the reason why what is called “allopathy,” or orthodox medicine, includes within its wide range all the philosophy which, so far as we have yet gone, it is possible to bring into active operation. We shall presently see how it comes to pass that one remedy is so largely applicable,

and one mode of treatment so uniformly safe, in a given number of cases.

We need not, I think, go beyond our own shores in search of skill and ability in dealing with disease. I am not aware that in France, America, or elsewhere, the treatment adopted is more successful than that approved of in this country. The system, therefore, as, in a manner, indicated in our national pharmacopœia, is the one to which we look with confidence as the best that can be devised in the present state of our therapeutical knowledge. What, then, are the prominent features of this system in the hands of the orthodox practitioner? In what light is medicine regarded by those of our physicians who retain a welcome and an honest faith in the work of their profession?

In seeking an answer to these questions, with a view to the present inquiry, I adopted a plan which, I have no doubt, you will regard as satisfactory for the purpose intended. From a large number of prescriptions actually dispensed in the city of London, I selected one thousand. These were written by different medical men for different diseases, and different symptoms of disease. They were also written at different seasons of the year, (Spring, Summer, Autumn, and Winter,) during a period extending over the past ten years. I did not select them on account of any speciality they possessed, but took them as they were copied, in writing, in the book kept, as usual, for that purpose. As, in this work, my eye passed over many thousands of prescriptions, I was enabled to satisfy myself that those I had selected represented with sufficient accuracy any similar number which might be collected in any part of London, and, by fair inference, any multiple of that number to the extent of hundreds of thousands. Here, then, I possessed a true key to the "existing state of medical practice" in this country.

Having these prescriptions at my command, I submitted them to an analysis (if I may use the term) which, I am bound to say, proved to be a work of very

considerable time and labor. The result arrived at after much careful noting, I will now place before you.

Whilst the Pharmacopœia contains 768 medicaments simple and compound, medical men do not adopt in actual practice more than 485; and what is rather remarkable, three-fourths, or 75 per cent., of these occur less than once in every 100 prescriptions written; so that if we take the remaining fourth, or the leading remedies as they may be called, we shall find that these are prescribed three times where the rest are only prescribed once. The inference to be drawn from this is, that if a medical practitioner were to treat disease with these 120 leading medicines, according as he may select them, and no others—presuming the whole 485, now in use, to be of equal value—the “odds,” if I may be allowed the expression, would be 1 to 3 against his success as compared with the practitioner who held the advantage of the entire range of remedies; but as these medicines are not all of equivalent value, as shown by the fact that 75 per cent. occur less than once in every 100 prescriptions, the advantage of the additional number above one-fourth, would be so reduced as to render the chances of the two practitioners very nearly equal. We shall see what further inference can be drawn in this direction.

It is impossible to pass over the fact that a few medicines take the lead in medical practice to the comparative exclusion and neglect of all the rest. Quinine heads the list by a long way, then Chloric Ether, Bicarbonate of Potash, Aromatic Spirit of Ammonia, Iodide of Potassium, Mercurial Pill, Compound Extract of Colocynth, and so on. Twenty-five of these medicines show an average occurrence of once in *seventeen* prescriptions, whilst those which remain, taken collectively, show an average occurrence of once in *one hundred and sixty-six* prescriptions. This is scarcely, perhaps, a fair calculation, but the difference is a very wide one, and serves to show where the greatest reliance in the power of drugs may be found to exist.

With regard to the prescriptions examined, it is well worthy of note, that of the 485 medicines ordered or prescribed, 429 are to be met with in the *Pharmacopœia*; a result showing the desirability of a thorough knowledge and appreciation on our parts of this important work.

It is perhaps, however, in the form of simple remedies that we shall best estimate the value of the medicines prescribed by the physician. Here the number is reduced to 171, and the order of things is somewhat changed. Mercury takes the lead and stands prominently at the head of the list. Mercury, the very name of which strikes terror into the minds of nervous and timid patients, is still the foremost remedial agent employed by the medical profession.* After mercury we have potash, then bark, then opium, and then iron. If we take twenty-five of these leading simple substances, as in the case of the compounds, we shall find that 95 per cent. of all the prescriptions written contain one or more of them in some recognized form. This, I think, brings the whole matter into the smallest compass, and places us in a position to offer such further brief comments as the subject may seem to require.

Mercury, potash, bark, opium, and iron. Are these medicinal substances of any service in combating the symptoms of disease? If not, the whole system of medicine is shaken, and scepticism is only too well founded. If, on the contrary, they are of service, then it is true philosophy to extend our faith, and, in the

* "And yet," says Sir Thomas Watson, "we are distracted by doubts whether the powerful influence it exercises on the body be for good or for evil in the diseases for which it is given." Could anything be more eminently unsatisfactory, or more abundantly disheartening than this? Of all the medicaments in the *Materia Medica*, the one which is most relied on, and most frequently prescribed for the cure of sickness and disease, is still so far a puzzle and a mystery to the medical profession, that it is not known "whether the powerful influence it exercises on the body be for good or for evil in the diseases for which it is given." Well, indeed, may the natural history of disease be asked for, and an investigation into the physiological action of drugs be demanded, with a view to placing the whole therapeutical art on a surer and more scientific foundation.

absence of certainty, or in the absence of probable injury from such a course, rely on what is possible as regards the entire scope of the *Materia Medica*.* Much I think, may be said to show, in a manner sufficiently conclusive, that, with respect to disease, Medicine possesses a power, the absence of which would inevitably lead to additional and prolonged suffering. But it is to be specially remembered that this power is limited. If you ask me where such limit terminates, I reply that it is beyond the scope of our present means to ascertain ; but of this we may be certain, that the true value of medicine will be exactly proportionate to the skill with which the remedial power it possesses, within the limit indicated, is developed in each particular case. It is this fact which renders it so undesirable to follow a routine method to the exclusion, perhaps, of timely and sufficient aid. If, indeed, we look at the constancy with which certain medicines are ordered, the treatment of disease would appear, at first sight, to be *solely* a question of routine ; these medicines being administered for the relief of a particular set of symptoms, because they have been found from experience to be of service in the majority of such cases. But a prescription is, or ought to be, a scientific document, the result of an adequate knowledge of the physical sciences, and a clear appreciation of all those minutiae with regard to compound medicines which are so essential to their success. If, therefore, to write a prescription were the sole duty of the physician, the course of special study through which he passes would not be lost, but, on the contrary, would maintain all the importance which his additional duties

* There can be no doubt that a large quantity of medicine may be taken without real injury to the system. Nature is very accommodating to substances generally regarded as highly powerful or deleterious. She rebels at first, but soon manifests a comparative indifference to their peculiar properties ; as witness the atmosphere of underground railways and coal mines, containing sulphurous acid and carbonic acid gases ; and the large quantities of alcohol, opium, and tobacco, consumed with apparent impunity by the people of all nations. Even arsenic may be taken in poisonous proportions, without ill effects, by the mere force of habit. The plan, therefore, of trying various remedies, where such is admissible, with a view to the possibility of the good to be derived from them, seems to be a wise and reasonable one in every respect.

now serve to impart. To obtain the advantage to be derived from medicine to the utmost extent of its limits, in the presence of an uncertainty which ever-varying circumstances must necessarily engender, is a work offering scope for judgment and ability of the very highest order. It is quite true that if a powerful drug, such as opium or digitalis, were given to a large number of persons, the similarity of circumstances in each instance would enable us to estimate, with a fair degree of certainty, the probable result. One stomach bears a considerable resemblance to another stomach throughout mankind. It is this similarity which renders any single remedy of known repute applicable to so many cases; and the same may be said, in a degree, of almost any drug in the *Materia Medica*. So far circumstances are sufficiently constant to sanction with a certain reserve, the adoption of such a mode of procedure. Universal medicines will exhibit their good effects, or supposed good effects, in a certain percentage of appropriate cases—considered appropriate as the result, solely, of experience—in which they are administered; and it is upon this principle, which is purely empirical, that drugs of probable efficacy are often—perhaps I ought to say are most frequently—recommended and taken. If, for instance, we were to select one thousand cases of ordinary cough, and administer to each the compound tincture of camphor, i. e. the pectoric of the pharmacopœia, there is every probability that 90 per cent. of such cases would be relieved thereby. True, but how many would be cured? It is not venturing too far to say that none would be cured by the medicine itself. There are few medicines, if any, whether their effects be produced by chemical, mechanical, or vital processes, that possess a direct curative action.* That which cures, call it force, vitality, or what you will, resides in

* Dr. Bence Jones favors the chemical theory of the action of medicines in the system; while Dr. Headland thinks the vital the most plausible.

the living body, and is a property, so to speak, of that body, possessed of limited power according to the relationship it bears, at any moment of time, to the laws of organized existence. The discovery to be made, therefore, is not so much the direct action of medicines in the system, if I may draw the distinction, as the exact position they individually occupy with regard to the reparative tendency which is there present. We know that medicines will produce an effect according as their properties are sedative, astringent, antacid, and so on; but we are not so well acquainted with the extent to which such effect is really useful in counteracting abnormal or faulty states of the system. Medicine will not cure, but it will often, I think, do one of two things. In either case its action is indirect. It will assist the healing power on the one hand, or it will add to it on the other. It is easy to see that this indirect action is altogether of a subordinate character. If the reparative or curative power be still in abeyance, the drug, indeed, will have done all that it was capable of doing, but the cure will be indefinitely prolonged, or it will become altogether impossible. This, I think, is where our faith has been at fault; and there would now appear to be some fear of our going to the extreme in an opposite direction. If we have expected too much from medicine, or if we have thought its virtues unbounded, the reaction may be natural, but it is scarcely philosophical. It is in the indirect, and not in the curative action of drugs that we must look for the true source of their remedial power to whatever extent they may be so imbued; and here we seem to have an approach to the secret involved in the question of the *vis medicatrix naturæ* as against the artificial treatment of disease by medicinal agents and compounds. We can assist nature and that is all. The idea is a very old one, but it has scarcely yet been fully recognized in practice. The beneficial action of quinine in ague, colchicum in gout, and arsenic in eczema, etc., is very mysterious, and quite beyond our comprehension; but

it is still directed to altering a morbid condition under the guiding influence, so to speak, of constitutional agency. Hence, similar symptoms, treated with the same remedy, will disappear more rapidly in one case than in another. Where the constitution is itself the cause of disease, it will often happen that medicine will avail but little, and the symptoms will be merely palliated, but not removed. The true physician will, of course, recognize this, and act accordingly. Success in curing disease demands that diathesis and drug-action should become a united study.

Routine treatment may be available to a limited extent, for, as we have seen in the case of our paregoric, opium will relieve pain and calm irritation in almost every instance in which it is given. Other drugs will act with more or less certainty according to their respective properties. So far there is a similarity in the stomach and nervous system, and a constancy in the drug itself, which may fairly be depended upon. We know this from experience, and hence such a method of procedure is termed "empirical." But still it remains that science and positive skill will appreciate and perceive those essential points which, viewed in the light of routine merely, may be dim and uncertain. Here then is our hope. We want more light—more knowledge. If these, in the present stage of our progress, sometimes fail, as fail they will, it detracts nothing from their innate power to overcome, as far as may be, the many and great difficulties of the medical art. Let us hope that time will, in such wise, carry us farther and farther away from the region of uncertainty and doubt, and lead us to a more intimate acquaintance with the varied and ever varying conditions of universal law.

For ourselves, let it be our constant care to see that our drugs have every chance of gaining the credit which is no doubt justly their due, and, by improved processes derived from an increasing knowledge of all that appertains to chemical, botanical, and pharmaceutical

science, to assist in securing that good result to which the efforts of our physiologists are now significantly directed. So may we confidently anticipate the near approach of a time when a clearer light will appear as the reward of diligent investigation, and when "medicine will obtain the highest place among all the arts that ministers to the welfare and happiness of man."—*Chemist and Druggist.*

DELIRIUM TREMENS IN RUSSIA.—Dr. Hermann read recently at the St. Petersburg Medical Society, an interesting paper on the great prevalence of acute alcoholism in Russia, adverting to the great and increasing consumption of brandy in that country. The lower class, indeed, consume no wine and but little beer, and an enormous quantity of brandy. The monopoly in the sale of this article which had subsisted for 300 years in the provinces of Great Russia was abolished in 1863. A moderate tax applied to the whole kingdom has rendered brandy dearer in the formerly privileged provinces of Finland and East Russia, while it has lessened its price in those of Great Russia. The result has been that, while in the former the consumption has diminished and many brandy shops have been closed, in the latter these, great and small, have sprung up in every corner—drunkenness increasing in proportion. Dr. Hermann gives a tabular view of the rapidly increasing consumption of brandy during the century 1749–1859, although the population has increased but slowly. The net revenue derived from brandy in the provinces of Great Russia in 1749 was only 1,786,955 silver roubles (a rouble is now 3s. 1½d.), but in 1859 this had risen to 74,171,015 roubles. During this interval some considerable fluctuations were produced by the agency of wars, scarcity, the price of bread, and changes in the mode of regulating the monopoly. The statistical returns since 1859 are defective, which is the more to be

regretted, as the adoption of freedom in the sale has altered the conditions. In St. Petersburg, for example, the brandy shops have increased almost sevenfold, and exist now in the proportion of one shop for every 293 souls. In the budget for 1866 the sum set down for the brandy tax for the entire empire is 115,500,000 silver roubles. That such an increase in the sale of brandy has been attended by most baneful effects can admit of no doubt, and attempts have been made to limit it both by the Government and by individuals; but these have all yielded to the resistance of the masses and the danger of damaging the revenue.

One consequence of this increased consumption of brandy is the increase of the number of cases of acute delirium tremens admitted into the St. Petersburg hospitals. During the five years, 1861-5, there were treated in five of these institutions as many as 3241 cases—viz., 2721 males, and 420 females. The mortality from this cause varied in the different hospitals from 16.02 to 7.73 per cent. After the trade was thrown open, in 1863, the frequency of the disease was found to be doubled in some hospitals, and in others three or four fold. In speaking of the treatment of acute alcoholismus, the author observes that recent cases may be often successfully treated by mere abstinence, quietude, and cleansing out of the *primæ viæ*; but that where the characteristic delirium sets in severely, the patient is best removed from his habitual surroundings to a hospital, the separation from these alone constituting a part of the cure. In favorable cases the critical sleep will come on most frequently on the seventh day, and seldom on the fifth, but in quite recent cases as early as the third or fourth. Dr. Hermann, in the course of a long hospital practice, has tried every means of treatment that has been recommended, and has come to the conclusion that the disease can be actually cured only in a few cases, moderating or abridging the attack being all that in most can be accomplished. He thinks, too, that it requires a certain time to run its course, and that

the attempt to cut it short by heroic doses of powerful remedies is often mischievous. Opium is of course the most powerful sedative, and he usually gives this in one-grain doses from four to six times a day, doubling the dose at night; and these doses can be continued with advantage in most cases for several days. When, however, they have been continued for some days without benefit, and the patient from noisy is passing into muttering delirium, with coma threatening, the stimuli must be substituted for opium. The author does not approve of digitalis, and thinks little of the use of chloroform, and still less of antimony.—*Medical Times and Gazette.*

NEW YORK PHYSICIANS' MUTUAL AID ASSOCIATION.
—An organization under the above title has just been started in this city, the object being to afford relief to the heirs of its deceased members. The plan is, that upon the death of any member of the Association all the other members shall be assessed one dollar each, the sum total thus collected to be applied for the benefit of the heirs of the decedent. The expenses of the Association are to be paid from the initiation fees of the members—two dollars in each case. Any regular member of the profession in actual practice, or engaged in teaching medicine, may become a member, with the assent of the Board of Trustees, by paying the initiation fee and signing the Constitution. The officers are: President, John H. Griscom, M.D.; first Vice President, James Anderson, M.D.; second Vice President, Alex. B. Mott, M.D.; Secretary, Joseph S. Monell, M.D.; Treasurer, E. H. Janes, M.D. Directors—For one year, M. Herzog, M.D., R. J. O'Sullivan, M.D.; for two years, W. N. Blakeman, M.D., M. Blumenthal, M.D.; for three years, Joel Foster, M.D., James Kennedy, M.D.

NEW BOOKS.—Robin, of Paris, has just published a volume on Microscopic Anatomy, "Anatomical Elements, Comparative Anatomy, and Physiology of Epithelia."

M. le Dr. L. Souligoux, a work on Medical and Surgical Diagnosis, by Physical Means. Illustrated.

A new work in two volumes, by Mary Somerville, "On Molecular and Microscopic Science," is announced.

The fifth and final volume of the "Dictionary of Chemistry and the Allied Branches of other Sciences," by Henry Watts, has just been published by Longmans & Co., London.

Broca's "Researches concerning a new class of Tumors called *Odontomes*," is announced in Paris.

Dr. A. Raciborski has just published a "Treatise on Menstruation, its connection with Ovulation, Fecundation, and the Hygiene of Puberty, and the Critical Age, its Action in different Diseases, its Irregularities and their Treatment."

J. B. Lippincott & Co. have published a work on Odontalgia, commonly called Toothache: its Causes, Prevention, and Cure. By S. P. Shaw.

Messrs. Lindsay & Blakiston have the second revised edition of Aitken's Practice in press.

Messrs. J. B. Lippincott & Co. announce two volumes of a cheap edition of Reynolds's System of Medicine. Also, Aitkin's Science and Practice of Medicine. Fifth English edition. 2 vols.

Messrs. Wm. Wood & Co., of this city, also announce "Murchison on the Liver," and "Thompson on the Prostate."

Messrs. Lindsay & Blakiston, of Philadelphia, announce, Wright on Uterine Disorders; Taft's Operative Dentistry, a new and revised edition; Birch on Constipation; Duncan's Researches in Obstetrics; Hillier on Diseases of Children; Fox on Treatment of Dyspepsia.

HOW TO TEST THE POWER OF MICROSCOPES.—F. A. Nobert, of Barth, Pomerania, has, for this purpose, ruled on glass a series of parallel lines, so fine and close together that in some of his bands ninety of these lines occupy the space of a single hair, though in his very coarsest bands the lines have abundance of room, there being only fourteen of them in the space of one hair's diameter.

The lines are ruled in little groups called bands, several of such bands being on the same plate of glass, and of different scales or degrees of fineness. These bands themselves, composed of the finest imaginable lines, are nearly invisible to most eyes, inasmuch as they occupy the space of half a hair, or 1-2000 of an inch. Such a plate was used by Messrs. Sullivant and Wormly in their experiments, and had upon it thirty groups of different scales, the coarsest being ruled to 1-1000 of a Paris line, and the finest to 1-8000, a Paris line being .088815 of an English inch, or a little less than one-tenth. The whole thirty bands occupied a little more than 1-50 of an inch. Such minuteness is almost inconceivable.

But are there any microscopes that can separate these infinitesimal divisions of space, and make them visible?

Mr. Charles Stodder, of Boston, in an exceedingly interesting article in the *American Naturalist* for April, 1868, informs us that Prof. Quecket asserted "that no achromatic had yet (1855) been made capable of separating lines closer together than 1-75000 of an inch."

Mr. Ross found it "impossible to ascertain the position of a line nearer than 1-80000 of an inch."

Mr. De La Rue was "unable to resolve a line nearer than 1-81000 of an inch."

Dr. Wm. B. Carpenter, in his work on the microscope, published in 1856, said: "At present, the existence of lines finer than this (1-79000 of an inch) is a matter of faith rather than of sight." Three years later.

Dr. Carpenter substituted 1-85000; and three years later still, 1-84000. Prof. Bailey, of West Point, claimed to have seen lines as close together as 1-100000 of an inch; while Messrs. Harrison and Solitt, of Hull, England, asserted that they had measured lines on the diatom, *amphipleura pellucida*, as fine as 120,000 to 130,000 to the inch. Messrs. Sullivant and Wormly, after numerous experiments, stated, in 1861, that lines on the Nobert's test plate closer than 1-78000 of an inch, can not be separated by the modern objective; but in 1865-6, Max Schultz separated the lines as close as 1-90000.

In our own country, in 1863, Messrs. Greenleaf and Stodder, of Boston, saw the lines 90,000 to the inch. In 1867, Dr. Woodward, of Washington, resolved Nobert's band of 90,000 to the inch. He afterwards got 101,000. Recently both Messrs. Greenleaf and Stodder, with a Tolle's 1-6 immersion microscope, saw satisfactorily Nobert's band of 112,000 to the inch, thereby "establishing the fact of the visibility of such lines, contrary to the theory of the physicists."

Wonderful as the above facts in reality are, what is still more surprising is, that these bands of Nobert's can be photographed, and their images can be counted to the number of 60,000 to the inch. With what kind of a point does Nobert mark his lines, and how is that point moved?—*Boston Journal of Chemistry*.

HYPEROSTOSIS OF THE ENTIRE SKELETON.—Professor Freidreich, of Heidelberg, observes that cases of hyperostosis of single bones or of groups of bones, such as those of the face, skull, or pelvis, are common; but instances where nearly or quite all the skeleton is involved are extremely rare. Saucerette describes a case in which the weight of a man increased from 119 to 178 pounds, although the soft parts were wasting. W. H., a shoemaker, aged twenty-six, came to Professor Fredreich's clinic in May, 1867. In 1859 he observed,

without obvious cause, one of his feet, and gradually the leg, to become thicker, and about two years later both hands underwent considerable enlargement. On admission, the hands, feet and legs presented an elephantine appearance, and on feeling the parts, the enlargement was found to depend upon increase of bone. The phalanges and metacarpal and metatarsal bones were enormously thickened. The enlargement was especially great at the epiphysis end of the bones, although the diaphyses were also in a monstrous condition—the greatest amount of hyperostosis being observed at the wrist, ankle, and patella, this last remaining moveable. The bones of the thigh and humerus were less enlarged; and, indeed, all the bones of the skeleton participated more or less in the changed condition—the crista ilii, the ribs, and the spinous processes of the lower cervical and upper dorsal vertebræ being all excessively enlarged. The clavicles were double their normal circumference. Among the bones of the face, the zygoma, palate bones, and the alveolar processes were by far the most affected, the teeth having undergone no change. The hyoid bone was remarkably broad and thick. The vault of the cranium exhibited no deformity, and there were no irregularities or exostoses on the smooth surfaces of any of the bones of the body. Some measurements may give a more exact idea of the case. In a total length of the body of $167\frac{1}{2}$ centimetres, the plantar surfaces on each side measured 11 centimetres across. The circumference of the leg at the ankle measured 37; that of the wrist, 24. The circumference of the right knee was 44, and of the left, 37. The breadth of the tibia was $7\frac{1}{2}$, and of the clavicle 3. The cartilaginous structures participated to a considerable extent in the hypertrophy, as in the ear, tarsus, epiglottis, and in a less degree the vomer. The cartilages of the larynx and the rings of the trachea had undergone no change. The nails had attained a colossal size, those of the thumbs measuring $3\frac{1}{2}$, of the middle finger $2\frac{1}{2}$, and of the great toe 4 centimetres.—*Virchow's Archiv., and Bost. Med. and Surg. Journal.*

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Original Communications.

ART. I — *Medical Notes on the Island of Jamaica.* By
FREDERICK D. LENTE, M.D., of Cold Spring, New
York.

A PRINCIPAL object in furnishing this paper is to call the attention of the profession to a mineral spring possessing very remarkable virtues, especially in the treatment of some of the most intractable forms of diseases prevailing among us. But, independently of the object of improving the bodily health, the invalid would find a visit to Jamaica neither uninteresting nor uninstrucive. It abounds in picturesque scenery, and in trees of great beauty and magnificent proportions; and, as the main roads, kept up at the public expense, are very good, all parts of the island are easily accessible. It is rich in valuable mineral waters; in the great variety

of its plants, many of them extremely valuable for their medicinal virtues, or for use in the arts, and many for their elegant flowers. Of ferns alone, there are said to be four hundred varieties. Its singular rocky formations, in the limestone region for instance, near Spanish Town, and also the variety of sand and some sea shells found at great elevations, would attract one interested in geology. The ethnologist and philanthropist, as well as the politician, might also be interested, and perchance instructed by observing the effects of emancipation on the race and on the country, after a trial of over thirty years, during which period more than two generations have intervened; one reared, and another both born and reared under the influence of freedom. He will see the negroes in their appearance and manners precisely the same as they were thirty years ago, except that the more thrifty are on the last day of the week better dressed. He will hear them speaking the English language, the only one the most of them have ever heard, in a manner almost, and at times quite unintelligible to him. On inquiry among competent authorities, he will find that, although schools have from the first been established and kept up at the public expense in different parts of the island, it has been found impossible to induce them to send their children with any regularity at all; and, in consequence, that they are, as a class, little better educated than their forefathers from Africa.* He will learn that syphilis,

* There are no reliable statistics to indicate exactly what proportion of the blacks can read, but I consulted the best authorities in Kingston, who are well acquainted with the condition of the island in this respect. There is a great distinction made

phthisis, and leprosy, and analogous diseases are on the increase; that while there has been a moderate increase of the black population, associated however, as has been explained, with a deterioration of physique, there has been a diminution of fifty per cent. in the whites; the latter having been driven away by the diminished productiveness of the island, and the consequent stagnation of all business. He will find Spanish Town, the seat of government, little better than a crumbling ruin, and sad enough in its appearance, with its cracked and tottering walls, its ragged and moss-grown roofs, its courtyards rank with tropical growth, to inspire one, who had witnessed its former prosperity and pride, with another lay of "The Deserted Village." Even the present able governor himself seems to have fled from the scene of desolation to a mountain retreat. He will find also that the experiment of allowing the ignorant mass of the population to take an equal share in the government of the country has resulted in a lamentable failure, and that the Home Government has been forced to abolish the Legislature, and to give its own appointees supreme authority.

here between the terms "blacks" and "browns," and very justly. The latter are our "mulattoes." They hold themselves entirely aloof from the "blacks," seldom intermarry, and look upon them altogether as an inferior race. Therefore the above remarks must not be understood as applying to them. They comprise less than one fourth of the dark population. Although improved, like our mulattoes, in their mental capabilities, like them, their physique is impaired, and phthisis and scrofula prevail to a disproportionate extent among them. They are apparently regarded by the whites with great respect, although no miscegenation exists. They are very thrifty and intelligent, many of them well educated, holding offices of considerable importance.

The diseases to which I have referred in the beginning of this paper, are sub-acute and chronic gout and rheumatism, and cutaneous diseases. One of the springs to which I desire to direct attention, and whose analysis, made by Savory and Moore, of London, is given below,* is situated in the parish of Vere, about four or five hours ride in a carriage from Kingston, and also accessible by water. It is about three miles from the sea, and not much elevated above it; lying, therefore, in the level, and during the summer season, somewhat malarious region. It is called the "Milk River Bath." The river which flows close by, is, during the rainy season, *milky*, from admixture with marl. The spring water is not influenced thereby. It is owned by government, and the quarters for invalids kept up at government expense. The poor are taken in gratuitously; those able to do so, pay a trifling sum, and have each a separate bed-room. My information regarding the efficacy of this water was obtained from various sources, both lay and professional, but principally from the Hon. Lewis Bowerbank, M.D., the

* *Specific Gravity 1.027, Temperature 98° F.*

Chloride of sodium,.....	20.77
Sulphate of soda,.....	3.10
Chloride of magnesium,.....	4.12
Chloride of potassium,.....	.66
Carbonate of lime,.....	.10
Chloride of calcium,.....	1.50
<hr/>	
Mixed salts,.....	30.25
Water,.....	969.75
<hr/>	
1000.00	

With traces of iodine, bromine, lithia, and silica.

Custos* of the Parish of Kingston, and a gentleman of great influence in Jamaica. He remarked, in substance, to me: "I always feel a hesitancy in saying all I know about the efficacy of this water; because, in my experience, it has been little short of miraculons." His first personal experience was thus: he had been suffering for many weeks, months, if I remember correctly, with pain and stiffness in both the large and the small joints, and had tried all kinds of remedies that he and his medical friends could suggest. While confined to bed, under these circumstances, he thought he would try the "Milk River Bath." His medical attendant, Dr. Campbell, a physician of great repute in the city, thought him too feeble to bear the journey, and attempted to dissuade him from the attempt. But, having had a bed arranged in his carriage, he was conveyed to the spring, bathed in and drank the water rather freely, and in one day he was decidedly better; within three days he could move all his joints without pain, and within eight days, returned to his practice quite well. The immediate effects of the bath were rather alarming; his appetite was destroyed, and he became extremely feeble, with a sense of impending death. Immediately after leaving off the use of the bath, however, and returning home, his appetite returned, and he felt as well as ever in a few days. Since that time he has had frequent attacks of his old enemy, but he immediately resorts to the water internally, in doses of half a tumblerful three times daily, and within forty-

* The office of Custos is a very important and responsible one. It answers to that of Lord Lieutenant of a county in England.

eight hours feels decided relief. He was taking it at the time I made his acquaintance, and as usual felt relief on the second day. He says it occasionally acts on the bowels, and always powerfully on the kidneys, and very promptly, the diuresis lasting for twenty-four hours or more after discontinuing it. Taken hot it is less unpleasant, he says, than cold. To me it has a salt and slightly bitter taste hot, and is not very disagreeable. Many others, who have had personal knowledge of the effects of the water, agree in asserting its rapid action in the relief of those tedious and painful affections. I have some of this water, and intend to have a trial made both in private and hospital practice.

Another remarkable spring has but recently attracted attention in Jamaica, and is worth notice. It is situated in the parish of St. Ann's. The analysis of Dr. Attfield, a well-known chemist of London, is given as follows, in the Oct. 1867 number of the Transactions of the Royal Soc. of Arts and Agriculture of Jamaica :

The specific gravity is 1026.6. One gallon of pure water weighs 70.000 grs. One gallon of this water weighs 71.862 grs. The quantity of solid matter dissolved in the water is as follows :

<i>In one imp. gall.</i>	<i>In 100,000 parts by weight.</i>	<i>Per cent, by weight.</i>
2493 1-2 grs.	3469 1-2.	3.4695 or 3 1-2 nearly.

This is about the average amount of saline matter in the waters of the various oceans. About three-fifths of the solid matter is chloride of calcium, and the other two fifths nearly all chloride of sodium, a small quantity of chloride of ammonium also being present.

<i>In one Imp. Gall.</i>		<i>Per 100,000 parts by weight.</i>		<i>Per cent. by weight.</i>
Chloride of calcium,	1510 grs.	2101		2101
Chloride of Sodium,	941 "	1365		1365
Chloride of Ammon.	2.43 "	3.38		3.38
Pure Water.....	67546.57 "	96530.62		96530.62
	<hr/> 70,000	<hr/> 100,000		<hr/> 100,000

“Roughly speaking, a gallon contains $3\frac{1}{2}$ ounces of chloride of calcium, 2 ounces of chloride of sodium, and $1\frac{1}{2}$ grains of chloride of ammonium. A half pint tumbler of the water contains nearly $\frac{1}{4}$ ounce of chloride of calcium, and about half that quantity of chloride of sodium. This composition is remarkable, spring water containing such an amount of saline matter has probably never before been met with. And no water that I have examined, or the analysis of which is to be found in the books on the subject, contains so large an amount of chloride of calcium. Moreover, I know of no water containing only these three salts.” “Natural water holding more than two per cent. of chloride of calcium, probably has not hitherto come under the notice of the analyst.” “The water was examined microscopically, and spectrioscopically.” I have also sent for some of this water, and propose to give it a trial in those affections for which the chloride of calcium and other chlorides have been prescribed. As yet but little is known of its therapeutical effects. But enough is known to indicate that it must be used with discrimination, and in very moderate doses, as fatal results have been known to follow its careless use. The dose would probably be not more than three tablepoonsful three times a day.

The hot sulphur spring at Bath, St. Thomas in the

East, has long been known in Jamaica for its efficacy in rheumatic ailments and other affections. The water is nearly pure, but contains a large amount of sulphureted hydrogen, and has a temperature of 117° F. A cold spring runs close by, and most persons, I believe, find it necessary to turn this in to moderate the heat. Government formerly kept up an establishment here, but it is now abandoned. Good accommodations are, however, afforded in the neighboring village, and patients ride daily to the spring for the bath. Other less known medicinal springs exist in the island, but with them I had not time to become acquainted. One of them is a chalybeate and highly esteemed by those acquainted with it. Most invalids, who visit Jamaica for various complaints, visit Derbyshire's, near Kingston. With the peculiar virtue of his spring I am not acquainted. It is a mountain retreat, and healthy, commanding a fine view.

Newcastle is a locality worth a passing notice. It is a permanent encampment of British troops, perched on a mountain peak or ridge, about 4000 feet above the level of the sea, and rising quite abruptly, inaccessible except on foot or on horseback. On entering the harbor, it has the appearance, in the distance, with its white huts and tents, of snow scattered over the summit of the mountain. The road to it, cut out of the almost perpendicular sides of the mountain, in some places, and in others built up with masonry, is as wild and picturesque as can be imagined, especially that which branches off to the right, and leads around by Clifton Mount and Cold Spring. A more inconveni-

ent location for a camp could hardly have been selected, especially as there is not at all times a supply of water. On my way down, I met a train of near a hundred negroes, each carrying on his head, up the steep ascent, a box containing fifty pounds of ammunition for rifles, two tons having arrived from England the day previous. There are now about 900 men at the camp, the 84th Regiment and a section of a battery. The ridge is terraced in order to give room for huts and for roads, which wind about, doubling closely on each other, as the summit is approached, like a labyrinth. The great object of the inconvenient elevation was to secure immunity from epidemics. But last year, when the yellow fever prevailed, with more than ordinary severity, in Kingston, sixteen miles distant, (and my object in directing attention to the place was to notice this fact,) it soon appeared at Newcastle, no quarantine having been attempted; and, although every precaution was adopted to prevent its spread, such as moving the locations of the different companies to widely separated elevations, etc., large numbers were attacked, and the regiment lost forty men. The drainage, however, is not perfect, although it would seem that in such a situation, it could not well be otherwise. But the drains are mostly open, and solid matter, being thrown in, lodges and decomposes. I believe that the people living far below object to the drains being carried too near their vicinity. The health of the place is, as a general rule, good. But the changes of temperature are very great, and it is frequently enveloped in fogs and clouds, and at all times subject to sudden showers. With the

thermometer at 85° at Kingston, it was here, during my visit, at 65° . At night it sometimes falls to 50° . This indicates that almost any reasonable temperature is attainable in Jamaica by a very moderate journey. I should not fail to mention the politeness with which the surgeon on duty, and the officers of the regiment generally, received and entertained me. On the slopes around Clifton Mount, the peak adjacent to Newcastle, the extensive coffee estate of Dr. Hamilton, whose agent, Mr. M'Lean, was very kind and attentive, an interesting feature, in a medical point of view, is the cinchona tree in vigorous growth. These trees, now ranging in height from eight to fifteen feet according to age, were set out singly, here and there, at different elevations, around the steep declivities of the mountain, some three and some six years ago, by an agent of the English Government. None do well at a lower elevation than 3000 feet. The experiment is a decided success, as the vigorous and rapid growth of the plants attest; and now there is a nursery of 25,000 plants in this vicinity, and the number is to be increased. These comprise several varieties, the *C. Calisaya*; *C. Succirubra*; *C. Officinalis*; *C. Micrantha*; and *C. Pahudiana*. The latter has usually been considered worthless. But Dr. Hooker, director of the Royal Gardens of Kew, writes to the superintendent of the cinchona cultivation in Jamaica thus, "*C. Pahudiana* is yielding in India an excellent percentage of quinia, and I would advise you to give all kinds an *extensive* trial, as some species that yield little in America, have yielded a large amount in India." The tea plants, also, which are

scattered in the same manner about the mountain, although choked by shrubs and weeds, are vigorous, and fully assert their rights among their indigenous neighbors, who seek in vain to elbow them out.

In the city of Kingston itself, so old and time worn, and behind the age in appearance, the physician finds much to interest and instruct him, and much pleasure and profit in the intercourse of her highly intelligent and hospitable medical men. It is gratifying even to the foreigner, though I could hardly consider myself one, to note that, amid the depressing influences, to which they, in common with other professions and trades in the island, have for years past been subjected, the discouragements with which their reiterated appeals for aid in their good work, have met, and in consequence the very imperfect means at their disposal, how constantly they have kept pace with the onward march of the profession in the mother country, and how much they have effected, of late years, towards ameliorating the condition of the penal, medical, and charitable institutions of their city, and thus indirectly promoting the welfare of the whole island. Some of these I propose to notice.

The principal hospital of Jamaica is under the immediate charge of Dr. Steventon, and was formerly the workhouse, then the "Lunatic Asylum." As may be imagined, it does not, in any particular, conform to the requirements of a modern hospital. It consists of detached buildings, mostly of one story, formerly divided into numerous small wards, with little or no means of ventilation. Now, the partitions having

been knocked away at the suggestion of the medical officers, each structure forms one ward of considerable size. Two modern buildings have been added, within a recent period, of a more pretentious character. Something more than half the accomodation is allotted to males. Almost all the patients are negroes, a small proportion coolies, from the East Indies. A very large proportion of both sexes suffer from syphilis, frequently of a very aggravated character. For the sloughing and phagedenic forms, Dr. S. thinks the acid nitrate of mercury, his most reliable remedy. He thinks that fully one half of the patients treated are suffering from some syphilitic taint. And Dr. Bowerbank seems to be of a similar opinion. Phthisis is very common among the negroes, and the physicians think increasing regularly since emancipation. It generally pursues a very rapid course, proving fatal in about three months, usually attended with the formation of large cavities in the lungs. The mulattoes are, as with us, peculiarly prone to it. The want of animal food, the exposure to which the negroes subject themselves, and their habit of closing up the apertures of their contracted habitations at night, and of always covering up the head, if they have any covering at all, are no doubt fruitful causes of the prevalence of the disease. Cases of this disease not unfrequently occur among the whites; though the physicians say that phthysical patients coming to the island, improve. Some peculiar cases of what may be called "idiopathic anæmia," were pointed out to me; it comes on gradually, and without any assignable cause, and without lesion of any of

the organs. It is very rebellious. Patients often die quite suddenly if allowed to make any exertion. I saw a little boy five years old, just getting better of a severe attack of idiopathic tetanus. This disease is very common in Jamaica, and in some of the other West India islands. It is generally induced by a sudden chilling of the body or suppression of perspiration. Cooks, reeking with sweat, and rushing out into the cool wind in the evening, are, I am told often the victims of the disease. The mortality, compared with that of the traumatic variety, is not great; though it presents all the terrible suffering of the latter. The traumatic form is also very common, and follows the most trivial accidents. In Havana and its vicinity, there is a widespread dread among the people of this disease. Drinking iced water after hot coffee or chocolate, stepping on a cold floor with the bare feet, or exposure to a draught of air when perspiring freely, are alleged to be efficient causes of a violent and even fatal attack, though the danger is no doubt exaggerated by the Cubans. There is no question, however, as to the frequency of fatal tetanus from very trivial wounds. Two remarkable cases occurred during my stay at Havana, on the plantation of an acquaintance of mine, near Matanzas. Two little negroes, brothers, had each got a "chigoe" in the toe, and the mother, as usual, opened the sac with a needle, and pressed out the animal, filling the cavity with some simple application. Both were attacked the succeeding day with tetanus. Within three days one had died, and the other recovered only after a severe illness. There are localities in the

United States also particularly liable to this disease in both its forms ; as for instance, a district near Beaufort, North Carolina, and another in the middle of Long Island ; at least, they were so some twenty years ago when I knew them. Localities thus circumstanced have always been situated near the sea ; and I have heard it vulgarly attributed, among other causes, to the use of large quantities of fish as manure. The odor from these putrefying heaps is certainly bad enough to generate disease of some kind, though we should hardly expect tetanus.

To return from this digression, Bright's disease is very common in Jamaica, and on the increase, the physicians there think, as it appears to be with us. As regards yellow fever, the physicians here, as well as in Havana, look upon albuminuria as a far more important symptom, than we should infer from the various treatises on the subject ; in fact they seem to regard it as pathognomonic. They will scarcely pronounce a case genuine yellow fever, or seem certainly very loath to do so, when this symptom is wanting ; it occurs among the earlier symptoms ; it was present in every case I saw in the hospital in this city. In the treatment, but little medication is resorted to ; usually it is commenced by a mild cathartic, as a small dose of castor oil, which is repeated if necessary during the attack ; cold drinks are allowed, and free ventilation, but draughts of air are avoided. Vomiting is combated by minute doses of strychnine. In the surgical wards, I saw an interesting series of stumps attesting the great success of Pirogoff's operation, which is here preferred

to Syme's. There were three well healed stumps in the ward ; and a few days before, a fourth patient, operated on six months before, presented himself, having walked on his stump a distance of twenty miles with a load on his head, and with no injurious effect. Disease of the tarsus necessitating amputation seems to be quite common among the colored races here. Dr. Steventon says that wounds heal in Jamaica with remarkable rapidity, and that, in consequence, operations generally succeed. Is this due to the farinaceous and otherwise simple diet of the negro ? The thorough ventilation and superabundant supply of fresh air attainable by means of the uniform warm temperature of the level country of Jamaica, no doubt contribute to these favorable results. The Leper's Hospital is an institution of peculiar interest to one residing in a country where the disease is almost unknown. We there see congregated cases of a disease of which we happily rarely witness an instance in the United States. In passing along the principal streets of Kingston, I had had fingerless hands thrust before my face for alms, and here were seen the poor wretches in all the repulsiveness of the various stages of this horrible disease. There are about forty now in the institution. It is somewhat singular that, prevailing as it does throughout almost all the West India Islands, and indeed in almost every quarter of the world,* so little attention should be directed by the different governments or municipal author-

* It does not prevail as an endemic anywhere in North America except in the province of New Brunswick, in Greenland, and some of the Alaeutian Islands between Asia and America.

ities to the segregation or the cares of this outcast race. While all other classes of the destitute and sick are more or less carefully provided for, these seem almost everywhere to have formed an exception. Shunned and spurned by their fellow-men, they are usually left to shift for themselves and, for the most part, to obtain a precarious subsistence by begging, returning at night to some miserable deserted hovel in a lonely place, generally on the sea beach, to herd together from the inclemency of the weather. In this respect the original curse of God still cleaveth to the leper, "He shall dwell alone, without the camp shall his habitation be." The asylum in Havana, which receives patients from the whole island, forms an exception, and would be an honor to any community. It is beautifully situated, like many of the other public institutions of Havana, on the shore at the entrance to the harbor, opposite the Morro Castle, under the guns of the "Queen's Battery," and commanding a view out to sea and pure sea air. It is constructed in the usual tropical style, two stories, enclosing a handsome court planted with shade and fruit trees, flowers, etc., and is kept scrupulously neat; the floors are of marble, or glazed tile. The patients have better accommodation than in any institution I have ever seen. The males are domiciled in pairs, and have each a bed-room opening into a good sized sitting-room common to both. The females have the sitting rooms, but have a dormitory common to some eight or ten, where they are locked in at night. The males are allowed to go out into the city during certain hours of the day, but are not allowed to beg.

The females are, as I understand it, never allowed to go into the streets, or at all events, not unattended. Until very recently, a system of begging very singular, but very characteristic of Cuba, was allowed. It was farmed out, as it were ; that is, certain persons were appointed to beg for the lepers, and had a certain portion of the proceeds for themselves ; one third of the money, one egg out of three, one loaf of bread out of three, etc. But lately, the Captain General has prohibited begging altogether, and raises any deficiency by tax. The institution was founded by a bequest from a wealthy leper, and others have bequeathed considerable sums ; so that the Leper Hospital here seems to be a sort of pet concern.

The leprosy of Jamaica presents itself in the usual forms termed the anæsthetic, and the tubercular. Elephantiasis græcorum is also frequently used as a synonymous term. In its progress, it seems sometimes to assume one form, sometimes another, passing from one into another. Some of the patients present only blotches on the skin, of varying size and shape. These spots are perfectly devoid of sensation ; the thrust of a pin is not felt. I saw but little of the scurfy appearance of the skin usually associated with the idea of leprosy. The fingers and toes next become affected, and the manner in which these members gradually, and almost imperceptibly disappear, with little sign of ulceration or discharge, and with almost no pain, constitutes the most singular features of this curious malady. Occasionally there are pretty severe premonitory pains of a neuralgic character, but as the disease appears,

these disappear, and are replaced by the anæsthetic condition above noticed. There is no inflammatory stage, and the anæsthesia soon becomes so complete that the extremities often sustain serious burns before the patient is aware that anything amiss is going on, sometimes being made aware of it only by the odor of the burning flesh. The ends of the fingers seem first to swell, then contractions of the extensor tendons take place, producing distortions of the finger joints, and attended also by more or less stiffness of these joints, and rendering their use awkward and difficult. The bulb of the finger then seems to thin away by absorption or ulceration until the bone is exposed; this is eventually eliminated. In the meantime, a process has been going on in the soft parts, apparently of absorption and of retraction combined, so that, when the bone has been cast off, should the destructive process stop here, they are ready to close up the small opening, and to form an excellent stump. And, as the disease is often arrested spontaneously at any point in its successive steps, one may see at any time samples of stumps at any of the digital joints far better than we sometimes leave after our amputations. Another peculiarity of the stump is that a rudiment of the nail, or the matrix is generally to be seen on the stump, sometimes even at the metacarpal joints. This is supposed to result from the process above alluded to, the gradual retraction rather than absorption of the soft tissues.

I saw no instance where the destruction had extended beyond the metacarpal or metatarsal joints,

either in Jamaica or Cuba, although it does affect both the carpus and tarsus; and will sometimes dissect out their individual bones, thus producing subsequent contraction and deformity. During the progress of these changes, tubercles, completely devoid of sensation, appear on the face, by preference on the ears, lips, and nose, producing eventually horrible disfigurement of the features. The eyelashes and eyebrows also drop out, thus adding to the repulsiveness of the countenance. Later, the disease invades the larynx, having already affected the mucous membrane of the throat and nasal passages; and now the voice is reduced to a hoarse whisper, or is rendered harsh and raucous, with a nasal twang; thus completing a *tout ensemble*, which it would seem impossible further to elaborate.*

But, unfortunately, it is not alone this extreme of physical ugliness which brands the sufferer as an outcast. By this time, or before, his mind has also undergone a change, in some cases, not less marked than that of his body. His temper has become soured, his sense of right and wrong blurred or lost. He is disposed to complain of every body and of every thing; he is subject to sudden impulses; at one time meeting a patron or benefactor with smiles and seeming gratitude; anon, rushing on him with fierce anger. Their hopeless condition, of which they are well aware, the gradual, slow, but inevitable creeping on of this terrible malady, with

* In many cases the disease becomes extremely chronic, and is even arrested for twenty, thirty, or forty years, as far as the local difficulty is concerned, and after having done very little harm. One old negro, in the Havana asylum, has been there since 1816, having only a slight affection of the fingers and toes. He is succumbing now to ascites.

its loathsome footprints, renders them reckless of life, and impels them not unfrequently to the commission of murder.*

On the very day previous to my visit to the Hospital, one of the patients had been sent to prison for six months for an attack with a club on the matron. In the female wards, up stairs, two of the patients, with all that might have been attractive in the female face long since obliterated, *distorted* rather, by the fell disease, with fingers and toes partially destroyed, and voices smothered to a harsh whisper by laryngeal deposits, complained to the physicians, during our visit, that the night before the wretches below stairs had forced the door, and attempted violence.†

In the very extensive and accurate accounts of this disease, from every part of the world where it prevails, as given in the recent "Report on Leprosy," by the Royal College of Physicians of London, to the Secretary of State for the Colonies, I have met with but little allusion to this mental condition of the lepers, except from one of the reporters, Dr. Bowerbank, of Jamaica. He also pointed out to me another singular symptom, which I have not seen noticed, the almost

* A similar morbid mental condition exists among the Havana lepers, but, owing to the better arrangements which so superior an institution allows, the strictness with which they are watched, and the first dangerous manifestations punished, it has never been allowed to get beyond safe bounds. It is there noticed that those only slightly affected, as, for instance, only with contraction and rigidity of the finger joints, are more reckless and indifferent than worse cases.

† It has already been noted that, in the Havana asylum, the females are kept in dormitories, instead of separate rooms, and locked in; and not allowed access to the streets. This has been found necessary in consequence of the apparently increased development of the sexual appetite. One poor woman I saw confined to a separate room day and night, in consequence of what is there termed *furor uterine*.

invariable existence of buboes below Poupart's ligament. He has repeatedly represented to the Governor the existence of these dangerous mental complications, and the necessity of providing some especial place of confinement, and granting permission to imprison and punish them, as the only security against murder. It is only very lately that these wise suggestions have been acted upon; a portion of the prison has been set apart for the lepers, and I saw several in confinement there. It was through his persevering representations and exertions also, I believe, that Jamaica can now boast of a comparatively comfortable home for these miserables, and the institution is under his direction. At first, all coercion or compulsory confinement to the hospital was forbidden, but he has now secured the privilege of compelling them to remain in the house during certain prescribed hours; at certain hours they are still allowed to pursue their avocation of begging in the streets. "Latterly," he remarks in his official report, "some lepers have found it to their pecuniary advantage to frequent the thoroughfares, and to place themselves at the doors of the most frequented stores. In some instances, they have seized goods, knowing that the owners would not have them after they had been touched."

As to the classes most liable to this disease in Jamaica, the Jews, of whom there are a large number, although the most cleanly of all in their habits, are by far the most frequently affected; next the "browns," then the blacks, and lastly the Europeans, among whom it is extremely rare. In Cuba, the blacks, and

latterly these and the Chinamen, are by far the most common victims. There are, of course, few or no Jews on the island. The disease is increasing in Jamaica, Dr. Fiddes, a prominent physician of Kingston, says, after enumerating other causes, "perhaps the chief exciting and predisponent causes are to be found in the retrogression towards barbarism among the bulk of our population."

Whether the leprosy of the present day is identical with that described in Scripture, cannot be satisfactorily determined; its history, as there given, is very meagre. Modern leprosy is certainly hereditary.* The fact that God made it a part of his curse of Gehazi, that the disease should cleave to his seed, is accepted by some as evidence that the leprosy of that day was not hereditary. But this does not by any means follow. A disease usually hereditary does not always cleave to the offspring, and, when it does, often skips a generation, and occasionally two. The histories of the modern disease, coming as they do from remote corners of the globe, and running back to so distant a period, and, withal, indicating such a uniformity in its characteristics, would seem, in the absence of more direct evidence, to

* The modern disease is acknowledged on all sides to be hereditary. It is indeed spread now very considerably by intermarriage. A remarkable instance of hereditary transmission fell under my observation in the Havana asylum, in the case of three members of a family just admitted. A wife of a healthy man, and herself apparently free from any symptom of leprosy, and with no hereditary taint, as far as could be ascertained, gave birth to a healthy child, and nursed it; soon after, she showed symptoms of the disease, of which she eventually died. In the meantime, she had three other children. This first and two of the others, all daughters, are lepers; but the son, now seventeen years old, is not as yet.

render it highly probable that the two diseases are identical. *

Dr. Anderson, at present in charge of the Jamaica penitentiary, very kindly took me over it, and explained the working of the system among the blacks. When a convict enters, he is seen by the physician, and his physical condition, including his weight, noted. On discharge, he is again required to note the same things. Malingering is of course very common, both to escape labor and to secure change of diet. A previous knowledge of the weight of the patient affords important aid in determining the fact of actual disease; as illness, attended as it would naturally be, by a greater or less disability for taking prison fare, would reduce the weight very soon, and in the absence of all other objective symptoms, would cause the physician to keep the convict under observation, or subject him to a closer examination. Dr. Campbell once tried the experiment of keeping the convicts a year on farinaceous food entirely, without tea or coffee. At the end of the year, the blacks seemed to be in as good a state of health and strength as before; but he was compelled to allow the whites animal food. Their nervous system seemed to be particularly affected.

In the museum of the Royal Society of Arts and Agriculture, which association is just now undergoing a process of revival, which bids fair to be of practical

* Is it not also significant that, in the directions for cleansing a leper, as given in Leviticus, the priest is instructed to touch with the blood of the offering, the tip of the ear, the thumb, and the great toe, and that these parts are the favorite points of attack of the disease of the present day?

benefit to the island, I was shown by Dr. Anderson some very interesting specimens. It is here demonstrated that the plantains, bread-fruit, etc., so very perishable in their natural state, and yet so valuable in the tropics as articles of food, can, by the simple process of slicing and drying, be kept for an indefinite period, not liable to the ravages of insects, and, if necessary, used as food on long voyages, to alternate when necessary, with hard biscuit and other ordinary ship fare. By soaking and some very simple preparation, it may be converted into various forms of palatable food, and would no doubt act as a valuable prophylactic agent against scurvy. This fruit, especially the plantain, is so very cheap and easily cultivated, and the process of preparation is so simple and inexpensive, that it is singular the experiment has not been tried by the British government. There is one relic preserved here, to which a horrible though somewhat instructive history attaches. It is a rusty iron cage, made of bands an inch or so in width, to fit the exterior form of the human body, forming a sort of external skeleton in appearance. When first exhumed, in or near Kingston, it was supposed to be a relic of the cruelties of the Spanish Inquisition. Its history was, however, subsequently discovered, and is briefly as follows: In 1780, a rebellion of the blacks, instigated by a Guinea chief, caused the murder of a considerable number of the whites. As usual, a terrible retribution followed its suppression; and among other cruel modes of execution, this cage was contrived. The culprit was placed in it, his hands secured in front by a sort of clamp, and

having been hung up by a ring at the top, in the market place in Kingston, he was left without food or drink, and exposed to the view of all passers, until starvation and the torture of the instrument relieved his sufferings. His weight, if I comprehend its construction, was, according to the length of his legs, either borne on his perineum, which rested on a thin strap of iron, or on the soles of his feet, which pressed on sharp spikes some three quarters of an inch in length; and thus active physical torture was added to exposure and starvation. Under these circumstances, it is interesting, in a medical point of view, to note that the limit of endurance ranged from seven to nine days.

Another interesting feature of this rebellion is, that it appears to have originated in the crime Obeahism, since this is still practised among the blacks to a considerable extent. The term and the details of the system were imported from Africa by the "Obeahmen," or as our Indians would say, "medicine men." But what the exact nature of the art is I am unable to explain. The following, clipped from a daily paper during my short stay in Jamaica, will give some idea of it and of the excitement which the agitation of the subject produces at this day. "The largest crowd of peasantry which I have seen since Prince Alfred was at Kingston, was assembled at Easington on Saturday last. The attraction seemed to be the fact that two men were to be tried for practising Obeah, 'contrary to the statute in such cases made and provided.' Clear and conclusive evidence having been given against them,

the two men were found guilty, and sentenced to three months imprisonment. Their bottles, gourds, etc., containing the liquids of their craft, and the powders, etc., with which they galled their victims, were destroyed on the green, to the great delight of the crowd. The endeavors of the people told plainly enough that Obeahism is powerless in St. David's. It was pleasing to see sensible and respectable yeomen come forward and give testimony against these wretches, while on not one countenance was to be discovered the slightest trace of sympathy with the prisoners." I am informed that, although subtle poisons, in the form of potions and small powders calculated to do their work slowly and insidiously, (for the preparation of which the powerful vegetable poisons indigenous to the soil of Jamaica afford great facilities,) are made use of by the Obeah men, a great deal of mischief is done, and destruction of life compassed, simply through the influence of the imagination. Accordingly a good deal of mystery is employed by the expert, and the pretended ingredients of some of their preparations would do justice to the cauldron of Shakespeare's witches. The mere threat of an enemy, or a knowledge that these incantations were being practised against them, have created such an influence on the credulous minds of the negroes as to produce despondency, and finally despair, wasting and death.

My visit to the asylum for the insane, or "Jamaica Lunatic Asylum" in Kingston, which is under the superintendence of Dr. Thomas Allen, was rendered extremely interesting and agreeable through the courtesy

of that gentleman ; and at the risk of rendering this article somewhat tedious, to those readers not specially attracted by the subject, I desire to give it a somewhat extended notice ; because it illustrates how much may be accomplished with very limited means, with very unsuitable accommodations, and with a comparatively small outlay, by means of individual energy, ingenuity and perseverance ; but, more especially, because it affords me an opportunity to illustrate the excellent effects of the “dry earth system” of sewage, and to give positive proof of these results even when employed in comparatively large institutions. This system is destined soon to attract a large share of attention throughout the world from physicians, and from sanitarians generally, and I feel that the time and space are well spent in spreading any new or positive information on the subject before the readers of the Journal. One very great source of trouble and expense, especially where there is no head of water with an abundant supply, is the arrangement of suitable water-closets, and subsequently the constant supervision and expensive repair which they usually require. Dr. Allen has obviated the whole difficulty, in the case of his establishment, at one stroke, and not only gets rid of excrementitious matters by a very simple method, but actually makes it a source of no inconsiderable profit. He has secured this result by the adoption of the above system, which he calls the “earth closet.” He found, on assuming charge of the asylum, the dormitories constantly offensive from the gases emanating from the badly constructed drains, and diseases generated there-

by. He closed up all these at once ; and in each closet placed a suitable vessel, and alongside, a covered box of ordinary dry earth. This is the whole contrivance. A little of the earth, say two or three handfuls, are first thrown in, and after the vessel has been used, the the same amount is thrown over, just enough to cover it well. All odor is checked at once. In fact odor is almost entirely prevented by the earth already in the vessel. This may remain until it is convenient for the attendant to remove it. The doctor has extended the system to the bedside, and I can testify that it answers perfectly. Each commode has an earth box attached ; and if a bed-pan is used, a little earth is previously thrown in ; and what is remarkable, the discharge may be left upon it for inspection when necessary, and the odor is completely absorbed. The contents of the vessel, when emptied, are thrown into a box or barrel under shelter ; when full, this is allowed to stand a couple of weeks or so, when it becomes perfectly dry, and may be used over again several times if necessary, without any change either in its appearance or odor. Dr. Allen has also used it in his own house, where he carries out the earth system, as a matter of experiment, as many as five times successively. In places, where earth is difficult to be had, this is a fact worth remembering ; of course it's value as a manure is thus multiplied by as many times as it is used. When assistants are scarce, the receptacle for the contents of the vessels may be kept in the hall or ward without any danger of contamination of the air. Instead of China or

earthenware vessels for the closets or commodes, Dr. Allen, has had constructed, by one of his patients, a carpenter, small cubical boxes, which slide in and out as a drawer, and which are not even lined, but merely well pitched, and then painted on the inside with gas tar; a shallow box for the earth forms the back of the commode. This answers every purpose and costs him almost nothing. I am told that ordinary sand succeeds well, whether as well as bran I am unable to say. This system has also been introduced into the general hospital by Dr. Steventon, and I saw there a closet, to which eighty negroes were having access for all purposes, and there was not the least unpleasant odor about it, which cannot be said of any water closet accommodating half that number, with the thermometer at 85° , that ever came under my observation. With the old system of drains, but it must be confessed, a very imperfect one, in that hospital, although the closets were in a *detached building*, and every care taken to ensure cleanliness, the mortality among the patients occupying beds in the ends of the wards adjacent, and in close proximity, was frightful; out of all comparison with that of the other parts of the establishment. It ceased as soon as the nuisance was abated. During the prevalence of epidemics, and among the dwellings of the poor, this system becomes invaluable, as it is both cheaper and better than any other, requires no skill or experience, is always ready, or easily attainable. After having been used once or twice or as long as it is found advantageous to do so, it forms the most concentrated and valuable of all

manures ; and when understood by the agriculturalist, ought to command a high price. It is in fact *poudrette*, but far more powerful as a fertilizer even when only used once, than *poudrette* as usually manufactured. The amount of money thus saved, in an institution containing several hundred patients, would be considerable, and more important still, if used as in the case of the Jamaica Asylum, in the cultivation of a farm worked by the more quiet class of patients. In a crowded population where it is important to carry the cultivation of the ground to its highest possible yield, it becomes proportionally more valuable. In the dormitories of the worst lunatics, the box or utensil for excretions is pushed by the attendant through an opening in the wall at the floor, from the outside, and the patient can thus use it without the possibility of getting hold of it for mischievous purposes. Even for private residences, especially in the country, and in villages, this would be a very cheap and convenient arrangement. The closet, placed on the ground floor, but not necessarily, might open by a door about a foot square into a back yard, and thus obviate the necessity for conveying the utensil through any part of the house ; nor would it be necessary to remove the vessel more than once a day. This arrangement would be far less expensive than even the commonest privies, which, however well constructed, are notoriously offensive in hot weather, and are often the foci of dangerous epidemics.*

* On my return from Havana, since writing the above, I find a bundle of medical journals awaiting me, and, in the December No. of the London Lancet, a no-

Dr. Allen's patients are all blacks; and, as there is no compulsory law in Jamaica regulating the admission of the insane, he gets the worst cases, those not very troublesome and not dangerous being usually kept at home. It is therefore interesting to note the effects of treatment on this particular class, with all the inconveniences of a want of funds, arising from the poverty of the island government. He has never had a *camisole*, or a "padded room," or any special means of restraint in the institution. I only saw one patient in close confinement during my two visits; he was afflicted with homicidal mania, and had attempted the doctor's life. He was in the end of a corridor partitioned off from the other patients by iron rods, affording a sufficient space for exercise. A padded room was commenced but abandoned for want of means. To all other means of restraint he is opposed. He has no means of affording suitable amusements for his patients, but hopes soon to have, unless we except the

tice of the "Bengal Sanitary Commission's report on Experiments made to test the Dry Earth System." It has been in operation in India for upwards of a year, having been first recommended by the Rev. Mr. Moule. "The Commission further reports," says the *Lancet*, "that the system is one of the most valuable contributions to practical sanitation, and is particularly well adapted for gaols." "The result of official inquiries as to the working of the system in Bengal, shows that it is thoroughly established in the hospitals, lunatic asylums, and gaols." Dr. Mouatt, the Inspector General of Gaols, pronounces its introduction to be, "without exception, the greatest public benefit conferred by a private individual in a matter so essential to public health, that he is acquainted with." The Inspector remarks that the employment of dry earth was introduced by Sir Henry Lawrence in the Punjab, "many years before it was perfected as a system by Mr. Moule." It is gratifying to find, from this report, and the above comments of the *Lancet*, that I have not over estimated the value of this system, and that the ideas advanced regarding the more general application, as to private houses, villages &c., are very similar to those entertained by the editor after a careful consideration of these reports from the Indian Government.

sea-bathing, which is a unique feature in the asylum, and is intended rather as a hygienic measure than amusement.

The grounds extend down to the harbor, and Allen has constructed a bathing inclosure of sufficient capacity to allow one hundred bathers at one time. Every day, both sexes, at different hours, use this magnificent bath, and enjoy it exceedingly. As many as sixty of the males bathe at once, watched by four attendants. For the improvement of the mental and moral condition of his patients, Dr. Allen relies almost entirely on *occupation*. For the worst class, almost the sole occupation is picking cocoa-nut fibre, one which the most imbecile can readily comprehend, and in which they seem to take quite an interest. To the most industrious he gives small rewards. The result of this work, simple as it is, is seen not only in keeping the insane out of mischief and improving his habits generally, but assumes a tangible form in providing them with comfortable, clean, and sweet beds. This fibre, when well picked, which is here done without any preparation of the husk whatever, is very elastic, has a pleasant odor, can be washed without difficulty when necessary, and makes a better mattress than any other material except such as is very expensive. Most of the husks are furnished by trees in the Asylum grounds; others are picked up in the streets and market place. The cocoa-nuts themselves are converted into oil, in the establishment, for burning and other uses. The more trustworthy patients are employed in cultivating the vegetable garden, or labor on a small farm, where

they raise tobacco, cotton, etc., for use and for sale. Some do the tailoring, some the necessary carpenter's or mason's work, under the direction and with the assistance of the attendants. Almost all the work in the institution of this kind within a few years has been done, and most of the furniture made by the patients. In choosing his attendants, he selects such as have more or less knowledge of these mechanical trades, so that he can employ them in a double capacity. In fact, he does not usually allow any of the attendants, especially those superintending the more quiet patients, to be idle, but they work with their charges, thus instructing them, and at the same time setting them a good example. The women are employed in appropriate employments, sewing, making little baskets of cocoa-nut fibre, etc. They not only do all the sewing of the Asylum, but work for other institutions, and for private families sometimes. From the money raised in this way, the superintendent is slowly accumulating a fund, now at interest in the bank, from which he expects eventually to make a pecuniary present to the most indigent who are discharged cured. The number of patients now in the house is one hundred and two. He has no medical assistant or apothecary, but hopes soon to have one. He has one warden, or "head attendant;" one matron, or "female head attendant;" one clerk, who performs the duty of treasurer, etc.; one house porter, one messenger, (a boy,) one night and eight day attendants; one cook, with no assistant except the patients, and one linen washer. This is his whole force now, but, for several years he had, with less

accommodation, and the same corps, from 230 to 250 patients. Upon his urgent solicitation, the Government finally agreed to insist on no more admissions for the present. As regards the behavior of the patients, I may state that while we were in a large enclosure with sixty of the worst class and four "watchers," some working, some walking about, some lying in the sun as if asleep, the word was suddenly given to "fall in," when slowly, by twos and threes, and finally one by one, every man ranged himself in line, with his back to the wall, and stood silent, while we passed down the line and inspected them. At dinner, these same negroes, at the word, sat quietly in their seats, while the attendants passed around and brushed their wooly heads when necessary, and sewed up rapidly any rent in their clothes. When the food was put before them not one touched it, until, when all had been served, one stepped to the end of the table and "asked a blessing." Many of them were allowed knives, not very sharp, and forks with short prongs, but the worst had spoons. Going through a room adjoining the dining hall, I observed a negro, blacker than the ace of spades, practising sacred music on a melodeon, with great care, for the Sunday services. Altogether the sight was to me an extremely impressive and pleasing one. Such an exhibition of order and decorum, and comparative happiness among the insane, may at any time be enjoyed at any of *our* asylums, but in these we have a different race to deal with, and means at command adequate to every want, and accommodations and appliances for affording every facility to the physicians to carry out

their noble work. With the reverse of all this, and with patients drawn entirely from the most degraded race, my aim has been to show what can be accomplished. As regards statistics, there have been, during the past year, thirty-six per cent. of recoveries and eleven to twelve per cent. of mortality. In six years, two accidents only, and they not of a serious character. Many years ago this asylum was projected in England on a grand scale; a good representation of what it was to have been forms the frontispiece of Connolly's work on "The Construction and Government of Lunatic Asylums." Some idea may be formed of the crowded state of the wards, and of the inconveniencies and shifts to which the superintendent was subjected, on first taking charge, when it is known that it was originally intended to accommodate only two hundred and fifty inmates, and that for several years, with only about one third of the intended capacity, he treated very nearly that number in his wards.

As an apology for the somewhat desultory nature of this paper, I ought to state that it was intended, when commenced, merely as a short letter, and written principally in the saloon of a steamer amid many interruptions.

ART. II.—*Carbolic Acid in Cutaneous Disease.* By F. P. MANN, M. D., Brooklyn, N. Y.

MY object in citing the following cases, is to call the attention of the profession to the efficacy of carbolic acid in the treatment of diseases of the skin, particu-

larly those which are known to depend upon, or are accompanied by, the development of any of the forms of fungi. I am not aware that this hydro-carbon has been used before, in the treatment of disease, except as a disinfectant.

CASE I.—*Chronic Eczema.* The patient, a child six months old, nursed by its mother, a young and apparently healthy woman. Eruption first appeared upon the scalp, when the infant was two and a half months old. The nurse applied olive oil, cleansing the head daily with Castile soap and tepid water; the eruptions, however, progressed rapidly, and when I first saw the child, namely, three and a half months from the time the disease commenced, not only the head but the entire trunk and extremities presented a most pitiable appearance. The thin, soft incrustations, more broad than prominent, of eczema impetiginodes, occupied the head, back, chest, and limbs, while here and there a fresh group of vesicles of eczema simplex pointed out most pathognomically, the true nature of the eruption. The evacuations were variable, sometimes of natural color, at others persistently green, and always very acid, as shown by litmus; on examination by microscope, they were found to contain milk corpuscles in abundance, mixed with casein, that separated by the lactic acid of the stomach, had passed into the duodenum undigested, and mingling with the bile, had drifted through the intestinal canal. The urine was examined chemically, and by microscope; it was highly acid, depositing urates freely; a few drops evaporated on a glass slide gave glomeruli and isolated crystals of uric

acid. The serous exudation beneath the incrustations was also highly acid. The milk from the mother of the child was also carefully examined; it contained an abnormal quantity of lactic acid, though the corpuscles did not coalesce, it gave an acid reaction to neutral litmus. Under the influence of thoroughly alkaline treatment, namely, baths with bicarb. soda, and bicarb. potass. internally, three times per day, in quantities sufficient to completely neutralize the acid reactions of the dejections, urine, and serum from the eruption, (an alkali was also given to the mother,) so rapid was the improvement, that within ten days, the scalp was free from disease, and the irritation of the surface everywhere much abated.

Fresh groups of eczema simplex, however, continued to be reproduced upon both body and limbs. I then determined to try the effects of carbolic acid as a parasiticide, having recently tested its power in the destruction of the penicillium glaucum, and torula cerevisiæ; accordingly, a solution containing half a drachm of carbolic acid in four ounces of water, was applied three times per day, to the eruption. The effect was immediate; the vesicles disappeared promptly, producing a slight exfoliation, and did not return, except a few groups about the neck, which two or three applications of the solution removed.

CASE II.—*Impetigo*. The patient was a child of ten months old, of strongly strumous diathesis; the pyodracious pustules were developed upon the upper lip, and about the mouth, while from the nares issued a sanious and very acrid discharge. The carbolic acid,

same strength as before, was used freely upon the eruption, and the nares were also injected with the solution: the effect was quite as marked as in the former case, the pustules withered, and soon altogether disappeared, leaving the skin free from irritation.

CASE III.—*Psoriasis inveterata*. Two years standing; patient a stout girl fifteen years of age, body and limbs covered with the eruption. Ordered Donavan's sol. Carbolic acid to be applied every morning in proportion of one part of the acid to four of water, body to be sponged with Castile soap and warm water, prior to its application. In three weeks from the date of the first application, not a vestige of the eruption remained. How far the Donavan's solution assisted in producing this rapid convalescence from one of the most obstinate of all cutaneous diseases, I leave others to judge.

ART. III.—*Tinnitus Aurium*. By O. D. POMEROY, M.D., New York.

WHENEVER an impression is made upon a nerve in the human organization, it responds in accordance with its own proper function; when on a motor nerve, it produces motion; on a sensory nerve, sensation; upon the optic nerve, light; on the auditory nerve, hearing, etc.

If the auditory nerve receives an impression by means of sonorous undulations, through the membrana tympani, and the portions of the auditory apparatus external to the nerve, it is called hearing, in the ordi-

nary sense of the term. If the nerve conveys a sensation of hearing to the brain, without the reception of sonorous undulations, it is called tinnitus aurium, or a noise in the ear. It is often spoken of as an imaginary sound, but we shall endeavor to show that it may in some cases be an actual sound produced within the apparatus of hearing. In so far as the sensation of sound is produced by a hyperæsthetic condition of the auditory nerve, we may call it an imaginary sound. It may certainly be called "a depravation of the sense of hearing," (Watson.) These noises are of the greatest variety. The description of them depends much upon the intelligence of the patient; the lower and more ignorant classes are inclined, whether correct or not, to compare the sound heard to some object with which they are familiar. On the contrary a fine power of description in the patient gives us a very exact statement as to what is heard. The sounds usually resemble the hissing of steam escaping from a steam boiler, the roaring of a cataract, the discharge of firearms or even of cannon—various musical sounds, and even whole tunes are distinctly heard—the whizzing of a bullet, the beating of drums, the rushing of winds, the ringing of bells, human voices, the squeaking of rats and mice, the humming sound of gnats, the singing of a tea-kettle, etc., etc.

The causes of these sounds may be divided into—1st, hyperæmia of the auditory apparatus; 2nd, malposition of the membrana tympani; 3rd, anæmia; 4th, causes dependent on the condition of the brain and auditory nerve; 5th, causes not classified.

Hyperæmia. This is by far the most frequent condition in which the symptom is observed. In almost every case of inflammation of the tympanic cavity or membrana tinnitus will be present, occasioned most likely by the pressure upon the auditory nerve, the result of the intumescence of the parts; in part also by the hyperæsthesia of the nerve, so frequent an attendant on inflammation; also by the stasis of blood in certain parts compelling the excessive forcing of blood through other parts, thus producing a true murmur, either arterial or venous, especially if there be any deposition within the calibre of a vessel narrowing its orifice, or roughening the internal surface of its wall. Under the same division, is congestion of the ear from a rush of blood to the head, as by the use of stimulants, violent exercise, mental emotions, bending the head forward, a full meal inducing plethora, a full habit of body, an excitable circulation, (for all that is necessary to produce a murmur in a vessel is to force the blood violently through it,) etc. To prove the agency of hyperæmia in producing tinnitus it is quite sufficient to compress the common carotid artery by which much and in some cases all of the tinnitus is temporarily relieved, an experiment we have often tried. It is also true that tinnitus may be produced by sudden and violent movements of the head; in short, anything which accelerates the movement of blood in the parts.

Malposition of the Membrana Tympani. This is generally a too great concavity, (collapsed or fallen inward,) the result usually of inflammation, which by pressing upon the ossicles induces a compression of the laby-

rinth waters, a recognized cause of tinnitus ; thickening and rigidity of the membrana tympani, as well as many other degenerations and alterations, may produce pressure in like manner, as will also impacted cerumen resting against its outer wall. Aural polypi of the external canal by excessive growth may press on the membrane, producing results similar to pressure from other causes. An artificial membrana tympani may sometimes bear too hardly on the membrane, or in its absence on the ossiculæ, thus producing tinnitus ; of course it should then be readjusted.

The membrane may be pushed outward, becoming too flat, an occasional result of over distension of the cavity, which may cause buzzing or singing. We once had a case of this kind in which a cure was effected by pressing a piece of cotton wool upon the membrane and allowing it to remain for a few days.

Any foreign body resting on the membrane, although it may not produce a change in its position, is liable to cause singing in the ear. Desquamated epithelial scales from the membrana and canal may, as we have often observed, produce noises. Mr. Wilde speaks of a case of buzzing in the ear occasioned by a hair resting on the membrane. This may teach us the necessity of avoiding violence to the drum-head, as is often inflicted by ear spoons, probes, etc., which are rarely necessary in ear practice.

Anæmia is an occasional cause of tinnitus, whether dependent on chlorosis, spanæmia, loss of blood, or any agency which renders the blood watery. Under these circumstances the heart becomes irritable, and at times

impels the blood more forcibly through the vessels than normally, and, the watery condition of the blood producing a state of more or less vibratability of the tubes, we have a murmur as the result ; and this occurring in the vicinity of the auditory nerve, produces the symptom of a noise in the ear. Hysterical, hypochondriacal, dyspeptic and "nervous" patients suffer from the same symptom, from a similar cause. At other times an opposite state of things seems to obtain. In sudden fainting, we may have tinnitus and deafness from a diminution of blood supply to the auditory nerve, as blindness may result from a similar depletion of the optic nerve.

Causes dependent on the Condition of the Brain and Auditory Nerve, must of necessity be unsatisfactory. They include nearly all the morbid conditions found in the labyrinth. In a given case, if the cause of tinnitus is not accurately determined, the labyrinth must bear the responsibility, and until we are gifted with eyes which may penetrate into the darkened recesses of the internal ear, we must remain for the most part in our present state of ignorance. "Some defect in the nervous structure of the labyrinth," (Bishop,) may be a source of this trouble. Recent researches demonstrate that the acoustic nerve is extremely complicated in its mechanism. Before the terminal branches receive the sonorous impression, it is received by the organ of Corti, which resembles a piano scale in its construction ; there being a fibre for the reception of every kind of vibration audible to the human ear. That is, a sonorous impression causes one of these

fibres which is capable of vibrating in its own tune to co-vibrate—vibrate in unison with it.

The idea being founded on an experiment of this kind ; apply a tuning fork in a state of vibration to the sounding board of a piano, with the damper raised so as to insure perfect freedom of movement, and it will be found that of all the strings in the piano, that alone will give a distinct sound, which vibrates in unison with the tuning fork. Besides this we have short bristle-like hairs named after their discoverer M. Schultze, which communicate vibrations, together with the otoliths having a similar function. With this arrangement of parts concerned in audition it is not to be wondered at that even slight changes should affect its function.

According to Adam Politzer, the following conditions of the nerve may produce tinnitus : “ Primary structural changes in the labyrinth, as ecchymoses, extravasations of blood, new formations in the cochlea and nerve tissues ; chalk masses in the labyrinth, varicose dilatation of the vessels of the auditory nerve, colloid degeneration of the nerves,” etc. Beside this there seems to be an intimate connection between noises in the ear and diseases of the brain. Wilde says : “ Sometimes the tinnitus exists as an isolated symptom ; but in several such cases I have remarked, that sooner or later either aural or cerebral disease manifested itself.” Harvey, of London, says : “ The brain itself may be the seat of this disorder ; and as visions and apparitions disturb the imagination in delirium and insanity, so sounds proceeding from no outward source

are heard and described by the patient in glowing terms ;” and again : “ Tinnitus may present itself as a symptom indicative of one of the most serious maladies to which the human frame is subject. We allude to those cases where it is complained of as occurring within the head, where it is accompanied by other symptoms diagnostic of cerebral disease, and where it is one of the precursors of apoplexy, ramollissement of the brain, or of palsy.” These statements must be taken with a good degree of allowance ; for many aural diseases are diagnosticated cerebral, from a lack of knowledge of the diseases of the labyrinth. Dr. Voltolini, of Breslau, has demonstrated that acute inflammation of the membranous labyrinth has usually been considered meningitis, so closely are the two diseases linked together. Disease of the ear may produce cerebral trouble, and vice versa, the symptoms of either may be quite identical, precluding the possibility of diagnosis. Troeltsch remarks, “ we find these subjective tones, or noises, in all irritated, abnormal conditions of the brain, whether arising from the organ itself, or arising as a reflected sensation or irritation from any source whatever. We need not speak of the peculiar affections of the cerebrum ; such as intoxication, anomalies of the materials of the blood, transient and permanent interferences with free circulation, with also that class of indefinable morbid symptoms, to which the vague names, relaxation of the nerves, excessive nervous irritation, nervousness, and the like, are attached.”

From this we infer that a disease of the brain may cause tinnitus, by production of disease in the ear, or

even by mere functional disturbance of the latter. Toynbee and Voltolini, have very thoroughly studied the pathological anatomy of the internal ear, and describe conditions as follows: extravasations, exostoses, thickening and atrophy of the integument, insufficiency of the semicircular canals, hypertrophy of the cochlearis muscle, calcareous formations, a fibro-muscular tumor, absence and excess of otoliths, collections of pigment, amyloid degeneration of nerve, and a sarcoma of the nerve, most if not all of which may produce noises in the ear.

Causes not Classifiable.—Having trumpets of too resonant material, of too large a size, may by exaggerating the sonorous impressions on the nerve produce tinnitus, by the violence or shock communicated to it. This is certainly one of the objections to the use of trumpets. Kramer, who has much to say of tinnitus, and tabulates one thousand cases of all kinds of ear trouble shows that four hundred and ninety-six were associated with tinnitus, (and we think his estimate is altogether too low, and Mr. Troltsch speaks of tinnitus being a “symptom in most of the diseases we have studied together;”) he places great stress on sources of irritation to the chorda tympani nerve being productive of tinnitus by reflex action, a theory apparently plausible, inasmuch as almost every case of entire destruction of the membrana tympani (and quite likely of the chorda tympani, which passes across the tympanic cavity near to and almost touching the membrane,) is unaccompanied by tinnitus. In cases of deafness of long standing, this symptom is very persistent and annoying. Kramer

relates a case in which a man committed suicide to escape from a loud noise in the ear. Beyond a doubt, deafness, with its accompanying symptoms, produces more unhappiness than blindness.

Occasionally, according to Hyrtle, there is a large branch from the internal carotid running through the stapes, communicating motion to it and resulting in intermittent noises in the ear.

Dr. J. Muller speaks of a snapping noise in the ear, produced by a spasmodic contraction of the tensor tympani muscle. Politzer corroborates Türcck's statement, "that subjective noises can in many cases be varied in intensity by pressure upon the mastoid process of the temporal bone, or upon the first cervical vertebræ." Politzer states a curious fact, "when the sound ear was stopped by the finger a rushing noise was heard in the opposite diseased organ: the noise, according to the statement of the patient, was of great intensity, but disappeared as soon as the finger was removed from the healthy ear."

Wilde seems to think that the principle cause of tinnitus is a non-vibratability of the membrana tympani. Quinine sometimes produces tinnitus aurium: it is not an easy matter to state how. Wood, of Philadelphia, says, "that even in ordinary doses, it often produces considerable cerebral disturbance, evinced by a feeling of tightness or distension in the head, ringing, buzzing, or roaring in the ears, hardness of hearing, etc." We have observed similar symptoms during the administration of a half grain of quinine three times a day for three days. Congestion about the acoustic

nerve is undoubtedly the cause of the trouble, and would bring this under the head of the first causes mentioned. Some other remedies having a stimulating action on the brain may produce the symptoms, as opium, belladonna, iodide of potassium, etc.

From what has preceded we infer that the indications for treatment must be many and varied. We shall, however, content ourselves with a brief but perhaps comprehensive statement of what had better be done ordinarily in this very annoying affection.

During inflammation, whether acute or chronic, abstraction of blood by leeches to the external auditory canal, with counter-irritation behind the ears by means of blisters, will be our main reliance. Anodynes, as Magend. sol. morph., ether, chloroform, fluid extract belladon., stramonium, etc., may materially assist us. This latter mode is much praised by Politzer. In the acute cases, warm water poured into the ear contributes greatly to relieving the patient. In chronic myringitis with considerable redness of the membrana tympani, we have brushed a solution of arg. nit. gr.xx, ad.xl, to the ounce, upon the membrane, to find the redness soon disappear, and with it the noise, especially as we may infer that there was considerable irritation of the chorda tympani nerve, producing the symptom in question. Tinct. iodinii may accomplish a similar result. If the parts in the tympanic cavity are bathed in an acrid secretion, producing, as Kramer thinks, irritation to the chorda tympani nerve, we may hope, as he strongly does, relief from syringing with warm water.

In mal-positions of the membrana tympani, of course

we wish to restore it as far as possible, as in so doing we relieve the tinnitus, which is generally an accompaniment of this condition. The membrana becomes sunken whenever there has been a sufficient inflammation at either end of the eustachian tube to close it; at the same time the air in the tympanic cavity being soon absorbed, and with no new supply from the throat, through the impervious eustachian tube, there results a full air pressure on the external surface of the membrana, with no counter-pressure on the tympanic surface. Of course this state of the membrane results in pressure on the ossiculæ, and through them upon the labyrinth waters, by which the terminal fibres of the nerve of audition are pressed upon. We restore the impervious tube by appropriate treatment, and by injecting air into the cavity press the membrane outward, improving the hearing and relieving the tinnitus. There is no operation in aural surgery more satisfactory. This inflation may have to be accomplished by the catheter or Politzer's apparatus, or perhaps by a forced expiration, the mouth and nose being closed; a cake of inspissated cerumen pressing on the membrane may produce a similar state of things. Removal by syringing does not always relieve the difficulty, as the membrane may need to be pressed into position again, its natural resiliency being insufficient for this purpose. Polypi of large size, on being removed, will often cure the tinnitus existing during their presence.

Epithelial scales collected on the external surface of the membrane, should always be removed, if possible, without too much violence, either by syringing, after

previously macerating with glycerine or some alkaline water, or by forceps, under the eye of the operator by means of the forehead mirror. Pus in the tympanic cavity may press the membrane outward, and by the intra-auricular pressure produce tinnitus. If it cannot be removed by inflation, it may be advisable to puncture the membrane and evacuate it, whenever the sunken membrane becomes adherent to the inner wall of the cavity. Mr. Heriton, in Guy's Hospital reports for 1866, speaks of introducing a minute cutting instrument bent at right angles and severing the adhesions—a very difficult and doubtful measure. Puncturing the membrane when the tube is closed, with the hope of thus equalizing the air pressure on either surface and restoring its position has been successfully performed, although not so much so as to become very popular. Removal of the whole of the membrana tympani by means of the galvano-caustic, in cases where the chorda tympani is much damaged or completely destroyed, may be justifiable, as it will quite likely succeed. In total destruction of the membrane from disease, there is rarely any tinnitus, probably the chorda tympani nerve is also destroyed. So radical a measure, may not often be indicated, but in a case similar to the suicide from tinitus cited in a previous portion of this article, it certainly would be justifiable. In our studies into the causes of noises in the ear it is advisable to contemplate the absence of tinnitus in *almost every case* of loss of the membrana from disease. It certainly gives plausibility to Dr. Kramer's theory of irritation of the chorda tympani as being a principal cause of tinnitus. The treatment

of anæmic noises in the ear, needs no mention here. Those sounds dependent on the condition of the brain and acoustic nerve, are scarcely curable by art. The treatment for inflammation of the brain and its membranes may very properly be instituted; a seton in the nape of the neck or blister behind the ear is justifiable but promises little. When we have followed the aural difficulty to the labyrinth by the diagnosis of exclusion, we have tried various means to lessen the congestion of the nerve (if there was any) and to relieve its hyperæsthesia, as leeching, blistering, blowing gaseous compounds and vapors into the tympanic cavity, as the vapor of chloroform, ether, tinc. iodine, preparations of ammonia, etc., but with very doubtful results. Occasionally we have thought the vapor of chloroform contributed something to the relief of the patient. Many other indications for treatment may be readily suggested in previous statements under the head of causes. Certain it is as we learn better to treat the diseases of the human ear, we shall be less troubled with this most annoying symptom. Since writing the above I have heard of a very novel procedure practiced successfully by Dr. Simrock of this city. It consists of removal of the incus, which in three out of six cases *entirely relieved* noises in the ear,

Reviews and Bibliographical Notices.

ART. 1.—*Lectures on Orthopædic Surgery, delivered at the Brooklyn Medical and Surgical Institute*, by LOUIS BAUER, M.D., M.R.C.S. Eng., etc. Second Edition, revised and augmented, with 84 illustrations. pp. 336. New York: William Wood & Co. 1868.

THE first edition of Dr. Bauer's book met with a very favorable reception. This fact, with the advances which have been recently made in the specialty are sufficient reasons for putting out a second edition. So far as the appearance of the book goes, it is greatly improved; the style, type, and illustrations being all far superior to those of the former edition. Considerable new matter has been added, particularly in reference to joint diseases.

The subjects chiefly treated of are, the different forms of talipes; diseases of the spine; deformities of the neck; of the knee; paralysis; rachitis and joint diseases.

As regards the treatment of talipes Dr. Bauer seems to discredit the remarkable success claimed by Mr. Barwell for the plan of elastic extension which he has proposed. Dr. Bauer thinks that extension, while very appropriate in most recent cases, is utterly unequal to the correction of deformities of any considerable duration. This is a point where opinion must chiefly depend upon individual experience, and from our own observation we incline to think the truth will more nearly coincide with Mr. Barwell's view than with Dr. Bauer's. The frequency with which the latter urges tenotomy for club foot is the more unexpected because he seems (p. 50,) to clearly recognize the paralytic origin of these deformities. The conflict between theory and fact in this particular is well shown by comparing pp. 75 and 74. In the former place he speaks of the paralytic form of talipes equinus as "comparatively rare," while in the latter place is a very excellent cut (fig. 2,) of

the disease, which seems to be undoubtedly of the paralytic variety, the heel remaining in its normal position, and the deformity taking place not at the ankle-joint, but at the medio-tarsal articulation, as pointed out by Mr. Barwell.

The chapters upon deformities of the spine are quite long and contain much valuable matter.

The same praise can be given to the sections upon diseases of the joints, many parts of which are sufficiently interesting to lead us to wish they had been more extended. To the treatment of these diseases the author has made a valuable contribution in the construction of his "wire breeches."

The operation for false joint in bony anchylosis seems to deserve more consideration than the few lines Dr. Bauer devotes to it. We once had an opportunity of examining the specimen in Dr. Sayre's possession, to which Dr. Bauer alludes, and are constrained to believe that its appearance argues for and not against the operation which Dr. Sayre advocates.

The points singled out for criticism are not chosen as the most important, but simply as having caught the eye in a short examination of the book. As a whole, the work appears to be of decided merit, and a necessary addition to a surgical library.

ART. 2.—*A Manual of the Dissection of the Human Body.*

By LUTHER HOLDEN, F.R.C.S., Assistant-Surgeon of, and Lecturer on Anatomy, at St. Bartholomew's Hospital, London. With Notes and Additions by ERSKINE MASON, M.D., Demonstrator of Anatomy at the College of Physicians and Surgeons, and Surgeon to the Charity Hospital, New York. Illustrated with numerous wood engravings. New York: Robert M. Dewitt. pp. iv, 588; 134 cuts.

We welcome an American reprint of this admirable manual, whose expense in the English edition has made

it too little known among our students. As a hand-book for the dissecting room, it is in some respects superior to any other we know. Under the arrangement of a dissector—much the best for exhibiting surgical relations, as well as the most practically convenient—it still, by frequent cross references, gives a view of each set of structures as a whole, almost as clearly as by the order commonly followed in text-books of anatomy. It does not, of course, assume to replace these, any more than a clinical treatise would replace a systematic one, or an Ollendorf method a thorough grammar. The style is peculiarly happy. Free from the boldness that repels the student in so many books of this class, it is yet simple, clear, direct, colloquial without diffuseness; with much of the vigor and vivacity so attractive in the lectures of Dr. Chambers. The author has shown a wise judgment in deciding what to omit and what to make prominent; indeed, his sense of perspective constitutes one of his best qualifications as a teacher. Avoiding minuteness of detail, so bewildering to the beginner, with a few broad touches he brings his main objects into bold relief, so grouped as to show at a glance their chief relationships; with here and there a point of high light reflected from surgery, comparative anatomy, or physiology, to make the picture clearer and fix it more strongly on the memory. As examples of clear description, may be mentioned the dissections of inguinal hernia, and particularly that of the brain. The remarks upon the physiological action of the omo-hyoid, p. 12, the orbicularis oculi, p. 53, and the pectoralis major, p. 199, are worthy of note. In a quite careful examination of the work we have discovered few errors not referable to the compositor. Occasionally, however, a statement is given, at variance with commonly received opinion, and without notice of the fact; as where we are told that the lingual branch of the fifth pair endows the tongue only with common sensibility, and that the glosso-pharyngeal is exclusively the nerve of taste, pp. 74, 155.

Dr. Mason's additions refer chiefly to the size and weight of organs, the anomalies most often encountered in dissecting, and the surgical operations desirable for the student to practice. He has also appended valuable classifications of the vessels, nerves, and muscles.

This book shows the same clear, open type, good paper and binding which have marked the former issues of its publisher. But the proof-reading has been carelessly done, and misprints are very numerous, naturally most so in those portions set up from manuscript. Apart from their offending the eye, some of these are likely to perplex or mislead the student, as in the statement that the aorta is crossed by the right renal vein, p. 329. The diagrams are generally well, often felicitously designed, and in the English edition are uncommonly fine specimens of wood-cut printing. We regret that they are here so badly reproduced as in many cases to disfigure, rather than embellish the page, suffering not alone in beauty, but also in clearness and accuracy.

Reports on Progress of Medicine and Surgery.

MATERIA MEDICA AND THERAPEUTICS.

By B. W. M'CREADY, M.D., Professor of Materia Medica and Therapeutics, in the Bellevue Hospital Medical College.

ART. I.—*On the Mode and Administration of Phosphorus and of its Effects in Small Doses.*

For internal administration, Dr. G. Dujardin Beaumetz recommends one gramme of phosphorus to be dissolved in one thousand grammes of chloroform; this solution is enclosed in gelatin capules (perles) each of which should contain ten centigrammes of the solution. To guard against the action of light, capsules

should be colored. In administering the capsules, one should be given on the first day, two on the second, three on the third, the dose being increased by one capsule daily, until some signs of derangement of the digestive organs, colicky pains, vomiting or diarrhœa, occur; the phosphorus is then intermitted, to be again resumed, after an interval of several days, on their complete subsidence, being careful always to recommence with small doses. Dr. Dujardin Beaumetz has carried the dose as high as ten capsules.

Given in small doses phosphorus produces great excitement of the nervous system, increase of muscular activity, exhilaration of the spirits, and sometimes excitement of the genital organs, without causing any decided effects upon the circulation or the temperature.

ART 2.—*Phosphorus in Loco-Motor Ataxia.* [Bulletin Gen. Therap. 15 Mars, and 15 Av., 1868.]

Dr. Dujardin Beaumetz has given phosphorus in the manner above described in four well-marked cases of loco-motor ataxia. In all the cases a decided improvement took place; the step taken became less uncertain, the power of co-ordination was improved, and the patients were enabled to take long walks and to go up and down stairs.

The general sensibility was not affected by the treatment, except in one case, in that it was improved.

The eyes, which were more or less affected in all the cases, were not benefited by the treatment.

In addition, it was curious to observe, as one of the effects of phosphorus, in all the patients, a general contentment, a peculiar feeling of well-being, which made them desire the continuation of the treatment after they had once been submitted to it.

ART. 3.—*Phosphuret of Zinc*. [Bullet. Gen. de Therap., 30 Mars, 1868.]

M. VIGIER, recognizing that the preparations of phosphorus commonly employed are either exceedingly repugnant to the taste, or unreliable, or both, recommends as the best form for its administration the phosphuret of zinc (phosphide,) Ph. Zn. 3. This body is of a greyish color, crystalizable, friable, with a shining metallic fracture, unalterable in the air, but readily decomposed even by weak acids; the product of the decomposition being a salt of zinc, and phosphuretted hydrogen gas, Ph. H₃. In the stomach it is decomposed probably by lactic acid. The phosphuret of zinc in the dose of 6 centigrammes (about nine tenths of a grain) proved fatal to a rabbit between six and seven pounds weight. M. Vigier recommends that the phosphuret be given in doses of one eighth of a grain, either in the form of pill made with powdered liquorice and syrup of gum, or in powder rubbed up with a little starch.

ART. 4.—*Phosphorus in Mercurial Trembling*. [Gaz. de Hôpit. 1868, p. 48 and 50.]

A man thirty-seven years of age, who had been for two years engaged in plating looking glasses, entered the service of M. Gueneau de Mussy, at the Hôtel Dieu, affected with mercurial trembling. Nearly all the muscles of locomotion seemed agitated by regular and spasmodic oscillations, which seemed due to the alternate contraction and relaxation of the muscles. This trembling more marked in the upper than in the lower extremities, was increased by any attempt at motion. His walk was hesitating and difficult. He could neither feed nor dress himself, and he could not speak distinctly. He was emaciated and cachectic, and

looked prematurely old. The breath was fetid, the gums spongy and covered with a pultaceous exudation; the sides of the tongue near its point presented pale, elongated ulcerations; there was no appetite; the digestion was painful, with great thirst; and the generative faculties were wholly lost.

Under the use of sulphureted baths, of bitters and bark, of chlorate of potassa, and of tincture of iodine applied to the ulcerations of the tongue, the general health was restored, but the trembling though diminished was still very marked, and the anaphrodisia remained complete. This condition continued stationary; and the patient unable to perform any kind of work, became discouraged and attempted to commit suicide. Under such circumstances it was determined to administer phosphorus. The phosphuret of zinc was given in the dose of one eighth of a grain, (eight milligramm.) and was rapidly increased to double that quantity. The administration of the pills at first brought on diarrhœa, so that it was necessary to intermit them for several days. The phosphuret was then resumed, associated with a little thebaic extract. In three days the trembling was notably diminished, the patient could walk better and could use his hands so well as to be of service in the ward. The appetite was increased, and general nutrition as shown by the color of the integument, and increased embonpoint, rapidly improved. Fearing the cumulative property of phosphorus, after seven days M. de Mussy suspended its use to resume it afterward. The patient walks well there is slight trembling when he extends his hand, at the same time separating the fingers, his enunciation is distinct, he writes a good hand, and desires to leave the hospital, but previous to his discharge he will be submitted a third time to the seven days use of the phosphuret.

ART. 5.—*Oxalate of Iron*. [Am. Journ. of Pharmacy, June, 1868.]

Dr. George O. Schaeffer, Professor of Chemistry in the National Medical College at Washington, recommends the oxalate of iron as a chalybeate. It is readily prepared by precipitating a solution of the ordinary proto-sulphate of iron by oxalic acid, and washing and drying the precipitate. It is destitute of taste, free from astringency, and rapidly produces all the good effects of the chalybeates. The dose is two or three grains, three times a day. The preparation, introduced first by Dr. Schaeffer has been for a number of years extensively used in Washington.

ART. 6.—*Substitute for Chlorodyne*. [Am. Journ. of Pharmacy, May, 1868.]

Mr. Edward M'Inall, a pharmacist of Philadelphia, recommends the following as a substitute for the chlorodyne of J. Collis Brown.

Sulphate of morphia, gr.lxiv.

Alcohol (ninety-five per cent.,) f. oz.ij.

Purified chloroform, f. oz.vj.

Sulphuric acid, q. s.

Extract of cannabis indica, (Allen's,) dr.ss.

Oleo-resin of capsicum, gtts.xij.

Hydrocyanic acid, (Scheele's,) gtt.xcvj.

Shake together the sulphate of morphia, alcohol and chloroform, then add the sulphuric acid, shake well until it becomes clear, then add the oleo-resin of capsicum, extract of cannabis and hydrocyanic acid.

This forms a clear, dark, green, liquid, possessing the acrid taste of capsicum, and the odor of chloroform. A drachm contains about a grain of the sulphate of morphia, and the dose is given at from fifteen to thirty drops, (minims.)

Prof. Bernatzic of Vienna, recommends, as forming a permanent solution of morphia in chloroform, three grains of pure morphia, to be dissolved with the aid of three drops of the strongest acetic acid and the application of a gentle heat, in one drachm of strong alcohol; to this, when cold, is added a half ounce of chloroform. Three drops of this solution have been found to correspond to one grain, hence thirty drops contain the tenth of a grain of morphia.

ART. 7.—*Notice of some of the Effects of Bromide of Potassium.* [Ed. Med. Jour., Dec., 1866.]

Neglecting the alterative and deobstruent effects of the bromide of potassium, Dr. James Begbie has published the results of his experience of its use in some disorders of the nervous system.

1. It is a valuable calmate and hypnotic, producing sleep when opium and other narcotics have failed or succeeded only at the expense of sickness, vomiting, headache and other unpleasant consequences.

2. It is useful in those distressing nervous affections, the result of overwork and anxiety, in the student or business man. It often relieves nervous headache, hyperæsthesia, and perversion of the external senses—such as ringing in the ears, etc.

3. In the nervous disorders which are caused by vicious practices, it is a valuable addition to our other remedies..

4. In epileptic and epileptiform disease, particularly when of eccentric origin, it is a remedy of great value,

5. In delirium tremens, acute mania, melancholia, and nymphomania, it has calmed excitement and agitation, removed delusions and promoted sleep; (while in acute attacks of delirium tremens I have been disappointed in the effects of bromide of potassium; in the “nervousness” that often occurs as a consequence of

the excessive use of alcoholic liquors, and which often precedes delirium tremens, I have found it of marked benefit.)

6. It is often beneficial in whooping cough and spasmodic asthma, and it may be expected to succeed in laryngismus stridulus, and spasmodic croup. (Dr. G. T. Eliot of this city has for a number of years employed the bromide as a remedy in spasmodic croup, almost to the exclusion of other articles.)

7. It is useful in certain cases of vomiting in which the ganglionic nervous system is affected.

8. Employed in six cases of diabetes mellitus, it effected an apparent cure in three cases, a decided improvement in two, and was of no benefit in the remaining case. Dr. Begbie attributes its curative properties not only to its influence upon the nervous system, but to its alterative and absorbent effects upon the liver.

9. In the earlier stages of collapse in cholera, the exhibition of five or six doses of twenty grains each of bromide of potassium, at intervals of from half an hour to an hour, produced "a remarkable remission of vomiting, the arrest of cramp, and the speedy return of warmth and color to the previously cold and livid surface. To these indications of reaction there follow the cessation of the rice-water dejections and the secretion and voiding of urine. Here its efficacy terminates."

10. In a case of quotidian ague, which persisted in despite of large and repeated doses of quinine, the patient was advised to take bromide of potassium in full doses every three hours during the remission: he had afterward but one imperfect paroxysm.

11. It will sometimes give relief in neuralgia when more heroic treatment fails.

12. In a case of "Graves' disease" it relieved the nervousness and palpitation, but the disease otherwise was uninfluenced by it.

ART. 8.—*Physiological effects of Bromide of Potassium.*
[Bullet. Gener. de Therap., Oct., 1867.]

MM. Damourette and Pelvet have investigated the physiological effects of the bromide of potassium. Their experiments were made upon frogs, rabbits and birds, (sparrows, pigeons and magpies.) The bromide was introduced into the stomach, applied to the external surface and (most commonly) thrown into the cellular tissue by subcutaneous injection. Their experiments show that the action of the bromide is general, and that it extends throughout the nervous and muscular systems; that it is an anæsthetic as well of the centres and nervous cords as of the muscular and tegumentary surfaces; that it is acynetic as well of the muscles of the digestive, urinary and respiratory systems as of the voluntary muscles. In conclusion as the result of their experiments, they state: 1st, the effects of the bromide are always direct, that is due to the contact of the agent with the tissues either at the point to which it is applied, or upon the whole economy, throughout which it is carried by the circulation, or finally upon the organs of elimination.

The increased amount of the bromide of potassium at the point of application and on the surfaces of elimination, explains the earliness and the greater intensity of its action at these points. It explains the success of the bromide in hyperæmia, hyperæsthesia, and spasmodic affections of the digestive and respiratory apparatus and of the genito-urinary organs, without the necessity of calling to our aid elective action, or affinity of the bromide for the mucous membranes of these organs, other than that which results from their situation on the path of entrance or of exit of the modifying substance. It explains the universality of the nervous and vascular sedation, without obliging us to localize the effects of the bromide upon the spinal marrow, like M. Laborde, or upon the spinal marrow and head like MM. Eulenberg and Guttman.

1. In fact, the bromide of potassium exercises no elective action. Its specific character consists in attacking equally the properties of the motor and sensitive nerves, of the brain and spinal marrow, as well as those of the muscles, which it gradually weakens, to end by entirely destroying them.

The sensitive nerves lose their properties before the motor nerves, these last before the spinal-marrow, and that again before the muscles.

The heart alone survives during many hours, when it stops ; its irritability can be again aroused for some instants, to disappear at last totally. But from the commencement of the physiological or toxic action, the capillary circulation is diminished and the pulsations of the heart are retarded.

As to the respiration it appears to be influenced only mechanically, that is to say, its muscles are paralyzed, like the other muscles, more or less rapidly, early in frogs, and at the moment of death, which it necessarily occasions, in birds and rabbits.

We have verified the fact that the temperature is sensibly lessened in warm-blooded animals, first and during many hours in the region injected, and afterwards throughout the organism. This phenomenon depends upon the diminution of the capillary circulation, at first local, afterward general.

It is the same with the secretions of the mucous membrane and the skin, which are reduced in proportion to the anæmia of those surfaces. In like manner the genital depression is connected with the contraction of the afferent arterioles of the corpora cavernosa. These physiological effects furnish a satisfactory explanation of the therapeutic results obtained, and to obtain, against the excess of the vascular and nervous elements in disease.

3. We believe we owe in great part the uniformity of our results, differing in many points from those obtained by other experimenters, to the methods we have adopted in our investigation, methods whose import-

ance we do not wish to exaggerate, but which we believe we can recommend for the exploration of the properties of the spinal cord. It consists in withdrawing from the poisoning, not one part, as is done in many cases, but two, so that one of them may react under the influence of the excitation of the other, so long as the cord has not lost its power of transmission, or, in other words, to receive an impression and to react by a movement.

A second precaution consists in varying the mode of poisoning, and above all the place of the hypodermic injection, that we may not attribute to general poisoning the local effects which are due to the imbibition of the bromide.

With these two precautions, we are not led to admit, as other experimenters have done, localizations in the action of the bromide, and to look upon it as a poison of the heart or of the spinal marrow.

We have shown that it kills all, nervous system and muscles; it is a general nervo muscular poison."

ART. 9.—*Bromide of Potassium in Nervous Cough, and in the Vomiting of Pregnancy.* [Bull. de Therap., May, 1868.

Dr. Cersoy (de Langres,) publishes a case of violent cough occurring during pregnancy, and threatening to produce abortion. The cough was dry, hard, and almost incessant. Auscultation and percussion gave no evidence of disease of the lungs or heart. Opium, belladonna, laurel water, etc., were tried without benefit. After two months' treatment, Dr. Cersoy resorted to the use of bromide of potassium, gr.xxx per diem, in syrup of tolu; in two days the cough disappeared completely. Dr. Cersoy gives three cases of vomiting during pregnancy, in which the bromide in similar doses dissolved in decoction of bark, or in infusion of quassia, was equally effectual. These were the only cases of vomiting in which he employed the bromide.

ART. 10.—*Iodide of Potassium in Obstruction of the Lachrymal Canal.* [Bulletin de Therap., Jan. 30, 1868.]

Dr. A. de Beaufort claims, that in a number of cases of engorgement of the lachrymal sac, and of obstruction more or less complete of its duct, he has relieved or cured his patients by the use of iodide of potassium, in doses of from four to fifteen grains. Dr. Beaufort attributes the efficacy of the iodide to its local action, the iodide being largely excreted by the tears, and thus coming in direct contact with the diseased parts. He attributes a similar action and like beneficial results to the iodide in affections of the mucous membrane of the uterus. In these cases, however, he finds it necessary to employ the remedy in larger doses, fifteen to thirty grains, and continue its administration for a longer time.

ART. 11.—*Iodoform as an Anodyne.* [Bullet. de Ther. 15 Mai, 1867.]

M. Demarquay recommends the local use of iodoform in painful cancers of the uterus and rectum. From 50 centig., to a gramme ($7\frac{1}{2}$ to 15 grs.) are incorporated with enough butter of cacao to form a suppository, and this is placed in contact with the diseased part. The contact of the suppository, particularly if the part be inflamed, is at first more or less painful, but as a rule this pain soon passes off, and great relief is afforded without any disturbance of the organic functions. After the employment of the suppository, iodine is found abundantly in the saliva and urine. Dr. D., has employed the same remedy in painful affections of the prostate and of the neck of the bladder; in such cases the result was variable, and further experiment is required.

ART. 12.—*Musk in Laryngismus Stridulus.*

In the curious convulsive disease variously termed spasms of the glottis, thymic asthma, child crow, laryngismus stridulus, etc., Bouchut trusts mainly to the administration of musk. This he gives to the extent of from $\frac{3}{4}$ of a grain to a grain and a half in the 24 hours, minute fractional doses being given every hour in a little conserve, or rubbed up with mucilage and sugar. The improvement is immediate, and is soon followed by complete recovery. If the general health require, phosphate of lime, cod-liver oil, or salt-water baths may be added to the treatment. M. Bouchut has found henbane, belladonna, opium, etc., to exert very little influence over the disease. (In the writer's own practice belladonna, either in tincture, or in solution of the extract, given three times a day, so as to produce decided flushing of the face and dilatation of the pupil, has never failed to exert a speedy and complete control over the disease, but the remedy must be pushed until the specific effects of the belladonna are caused; as the system becomes habituated to its use, the dose must be further increased.)

ART. 13.—*External use of Liquor Ammoniae Acetatis.*
[Deutsch Klinik, 38, 1867.]

Dr. Tolmatschew of Kasan, has tried the local application of spirits Mindereri in several cases of muscular rheumatism as well as in some cases of pneumonia. The affected part was bathed well with the solution of acetate of ammonia and then dried; on being again covered with the usual bed-clothing, in each case the affected part broke out in a moderate perspiration with amelioration of the pain. The internal use of the medicine was sometimes combined with its external employment.

ART. 14.—*The Preparation and Use of The Resin of Podophyllum.* [American Jour. of Pharmacy, Jan., 1868.]

DR. EDWARD R. SQUIBB, in an article on the preparation and use of the resin of podophyllum, recommends "in view of its peculiar qualities and effects," the following formula :

"Resin of podophyllum, gr.xxxvi ; alcoholic extract of belladonna, gr.xviii ; (or alcoholic extract of hyoscyamus, gr.cxliv.) ; powdered capsicum, gr.cxliv ; powdered acacia, gr.xxxvi ; glycerine, M. xl ; syrup a sufficient quantity.

"Put the resin and sugar of milk into a mortar of large size, and triturate them together thoroughly. Then add the alcoholic extract of belladonna, and again triturate very thoroughly. Then add the powdered capsicum and acacia, and repeat the thorough trituration. Finally add the glycerine, and syrup enough to form a mass of proper pillular consistence, and beat the whole well together. Divide this into 144 pills, dry these by exposure at ordinary temperature until just hard enough to retain their form, and then keep in a well stopped bottle to prevent their further drying." These pills, Dr. Squibb states, are best used as an aperient and alterative medicine. "One pill taken at night will usually insure the morning evacuation if its occurrence be doubtful, or will increase it and render it more pultaceous and easier. If the pill be without effect, or produce too slight an effect, another may be taken in the morning. This will commonly ensure a pultaceous though not copious evacuation before evening, often without sensation but generally with occasional slight uneasiness. In the ordinary and perhaps the best use of this pill, to overcome constipation, the effect or want of effect from the first dose may be disregarded, and no more be taken until the next evening. The second evening dose is pretty sure to produce an evacuation on the following morning, and this of an improved character.

A third pill on the third evening still improves the effect, and often so far re-establishes a habit of daily evacuations that it becomes proper to omit one evening and renew the dose on the fifth. Next, two evenings may be omitted and then a pill may be taken twice a week, once a week, and so on, until the habit of constipation is corrected and that of daily morning evacuation re-established. In more obstinate cases, two or even three pills in the 24 hours may be required, and occasionally these give as little inconvenience as where one is taken.

“The advantages of the resin podophyllum are, that 1st, It acts upon the upper portion of the intestinal tract, about as exclusively and specially as aloes does on the lower portion, and from this circumstance affects the liver, pancreas, etc., as aloes does the uterus and bladder. 2d, It is slow and certain in its operation and not exhausting. 3d, It has little or no tendency to produce constipation after its use.

“Its disadvantages are that it is often harsh, disagreeable and insufficient in its operation, and so peculiar that it is more badly borne by a large proportion of persons, than other similar medicines. When used in large doses as an active cathartic it will almost always cause great complaint, and very few physicians will continue to use it thus, without acquiring a great prejudice against it.”

Dr. Squibb, cautions those who handle freely powdered podophyllum or its resin, especially the latter, against the irritating effect of its dust upon the eyes; it is worse than cantharides (?) and almost as bad as eupherbium. He has frequently been laid up for two or three days at a time, and suffered severe pain from this cause.

[In the albuminous urine connected with scarlet fever, in young children, the writer has often obtained great advantage from the administration of small doses of the resin of podophyllum ($\frac{1}{4}$ to $\frac{1}{8}$ of a grain) rubbed up with sugar of milk. It operates efficiently

and in general promptly, while its trifling bulk, and the comparative absence of disagreeable taste, are in such cases merits that can readily be appreciated.]

ART. 15.—*Application of Medicinal Substances to the Mucous Membrane of the Nasal Fossa.* [Bullet. Gener. de Therap., 15 Oct., 1867.]

Dr. Rainbert details a number of cases of neuralgia of the head and face, cured or greatly relieved by snuffing into the nostril a salt of morphia, rubbed up with sugar or marsh mallow powder. The proportion employed was from three quarters of a grain to a grain and a half of morphia, porphyzied with two drachms of white sugar. Of this one or two pinches were taken from time to time, until relief was obtained.

ART. 16.—*On the Physiological and Therapeutical Action of Veratrum Viride.* [Bullet. de Therap., 29 Feb., 1868.]

M. Oulmont, confirms by his experiments the conclusions of Mr. Scattergood of Philadelphia, that the physiological effects of veratrum viride are not due exclusively or mainly to the veratria it contains. Veratria causes, first, nausea, vomiting and diarrhœa, second, slowing of the pulse and respiration, with diminution of the temperature, much less marked, however, than that produced by veratrum; third, excitement of the muscular system, showing itself by rigidity, spasms and tetanic convulsions.

Veratrum viride and veratrum album, both affect the digestive, the circulatory and the respiratory systems, in the same manner up to a certain point with veratria; they differ from it in the fact that they never produce any of the phenomena on the part of the muscular system.

Veratrum album differs from veratrum viride, in the extreme intensity of its action on the digestive system, shown by the violence and long continuance of the vomiting and purging, and by the well-marked inflammation of the mucous coat of the intestinal canal, caused by it. Second, by the rapidity with which it produces its effects; serious symptoms follow each other without interruption, and the animal dies in from one to three hours. The dose of veratrum album which has caused death, has generally been less by one half than that of veratrum viride, necessary to produce the same effect. Veratrum viride is not only safer but more uniform in its action.

Dr. Oulmont procured some resin of veratrum viride, entirely freed from veratria by repeated washings with acidulated water. A portion of this was injected into the thigh of an active rabbit. Before the experiment the pulse was 230, the respiration 92, and the temperature $39\frac{1}{2}^{\circ}\text{C}$. In 1 hour and 35 minutes the pulse had fallen to 200, the temperature to 34°C . The animal was exceedingly feeble, and lay upon its side; it could neither stand or walk. The breathing was difficult and sighing. 35 minutes afterward the pulse was 140, the temperature 33° . The respiration was sometimes hurried, sometimes very slow, (nine per minute.) After an interval of an hour and ten minutes the pulse had risen to 180; respiration 24, temperature $32\frac{3}{4}^{\circ}$. The breathing was easier, but the animal lay on his side without motion; shaking him caused slight convulsive motions, during which he seemed about to die; he could neither sustain himself upon his paws nor his belly, but fell over on his side. Four hours and a half later, the condition was the same, but the temperature had risen to $34\frac{1}{4}^{\circ}$. Eighteen hours afterward, nearly twenty-six hours after the first injection of the poison, the animal seemed dying; the beat of the heart was feeble; pulse 120, respiration 36, temperature $26\frac{1}{2}^{\circ}$; (a fall of $13\frac{1}{2}^{\circ}\text{C}$.) The animal was brought near a stove, wrapped in warm covering and gradually recovered.

ART. 17.—*On the Poisonous Effects of Quinine upon the Lower Organic Life.* [Schmidt's Jahrbüch.]

The author was led to experiment with quinia on account of its frequent and efficacious administration in septicæmic diseases. In a solution of one part to four hundred of water, sulphate of quinia killed paramæcium immediately; in a thousand parts of water in two minutes, and in ten thousand parts in two hours. In the latter case the organisms showed marked signs of paralysis in five minutes, afterwards swelled up and melted into detritus. This fact is more remarkable from the extent to which the higher orders of animals bear quinine and from the resistance of paramæcium to the other alkaloids. It showed itself indifferent to the action of salicin (one part to twenty,) while chloride of morphia (one part to sixty) and nitrate of strychnia (one part to one hundred) were borne for an hour.

Quinia is a specific poison for the lower organisms that make their appearance in decaying liquids as well as for paramæcium. A putrid infusion of hay was mixed with white of egg, and the liquid swarming with monads, vibrios and bacteria was divided into four parts, to the first of these quinia, (one part to sixty,) to the second hypermanganate of potash, (one part to sixty,) to the third corrosive sublimate, (one part to one hundred and eighty,) and to the fourth liquor chlori, was added. Except for the monus crepusculum and vibrio lineola of the above named substances the chloride of quinia proved the strongest poison for the smaller infusoria. When we remember that most intermittents, probably (Salisbury) depend on poisoning from exhalations of decomposing plants, and that quinia, their specific antidote, remains a long time in the blood, questions of the highest practical importance unite themselves with the above facts, whose answers may, on the one hand, throw light on the nature of intermittent, and on the other, upon the process of its cure.

The researches of Binz were followed out by one of his pupils, H. Herbst, in an inaugural dissertation, (*Beitrage zur Kenntniss der Antiseptischen Eigenschaft des Chinin.* Bonn, 1867.) In his experiments, the addition of from one half to five grains of salicine to five hundred grains of a mixture of infusion of bean meal and hay water had no influence in preventing the occurrence of putrefaction, which came on as quickly as if the mixture had been left to the influence of air, warmth, and moisture alone; on the other hand, the addition of the same quantity of quinia to a like mass of liquid, almost entirely hindered the development of any unpleasant smell or the formation of mould. At the end of twenty-two days the infusions with salicine were partially dried up, completely covered with mould, and swarming with monas vibrio, and bacterium, while the one to which quinia had been added in the proportion of three grains to five hundred, and the next (two to five hundred) had no unpleasant smell, and only showed vibrios and monads under the microscope. In similar infusions of hay, to which one or two grains of quinine had been added, were found undeveloped algæ forms, some monads and minute vibriones. A third series of experiments in which quinine and hydrochlorate of morphia were added to vegetable infusion, in like quantities, showed in the same way the specific antiseptic power of quinia. In another series, hydrochlorate of quinia and nitrate of strychnine were employed in a similar manner; and here, too, quinia showed its superiority in preventing putrefaction. The further development and germination of *spirostomum ambiguum*, *oxytricha fusca*, *monas ovalis*, *chilomonas paramæcium*, *euglena viridis*, and other simple-celled organisms, whose life and motion are comprehended in the activity of simple protoplasms, and whose existence is bound up with the process of putrefaction, is checked by quinia, the motion in the lower cells brought to a stop, and the cells themselves destroyed by stronger solu-

tions. Strychnia likewise possesses antiseptic powers, but is inferior in this respect to quinia.

ART. 18.—*Succus Conii. B.P.* [Br. Med. Jour., March, 1867.]

Dr. John Harley, experimenting upon conium, found that the *tinctura conii fructûs B. P.* and the *tincture conii* of the London Pharmacopia, may be given in two ounce doses without any other apparent effects than those resulting from the alcohol of the preparation. The dried leaves, and the ordinary extract as well as the extract obtained from the root, contained but a trace of conia, and appeared to be destitute of active properties in ordinary doses; on the other hand, the *succus conii* seemed an efficient preparation possessing in a great degree the poisonous properties of conium. Taking one drachm of this latter preparation, three quarters of an hour afterward a heavy clogging sensation in the heels was suddenly experienced. This was clearly due to direct impairment of muscular power. On putting a foot on the scraper of the hospital door, the other leg felt almost too weak to support the body. Unusual effort was required to effect the movements of the body, and they seemed heavily and clumsily performed. Giddiness was induced by looking at a blazing fire at the other end of the ward. Two hours and a half after taking the drug, the effects had totally passed off. The maximum effect was apparent an hour and a half after taking the dose. On December 17, at 10.45 a. m., Dr. Harley took five and a half drachms of the *succus*. Three quarters of an hour afterward, disorder of vision suddenly came on. There was a feeling of giddiness induced by shifting the eyes from one object to another. So long as the eyes were fixed upon one object, the capacity of vision for, and the definition of, the minutest objects, were unimpaired; but the instant the eyes were direct-

ed to another object, all was haze and confusion. In order to remove these effects it was necessary to fix the eyes upon a given object and there retain them. The adjusting muscular apparatus of the eye was clearly enfeebled ; and its contractions were so sluggishly performed, that they could no longer keep pace with those of the external muscles of the eye. At 11.45 this derangement of the muscular apparatus of the eye was much increased ; and the implication of the third nerve was still further indicated, by great dilatation of the pupils and approaching paralysis of the levator palpebræ muscles. It now required considerable effort to raise the eyelids, and a general muscular lethargy spread rapidly over the body. At 12, noon, he felt great weakness in the legs, especially in the ham-string muscles. At this time he was cold, pale and tottering, and afraid to retain the sitting posture lest the muscular lethargy should result in general paralysis. He therefore walked about. The mind remained clear and calm, and the brain active, while the body seemed heavy and well nigh asleep. There was in fact a direct diminution in power of all the voluntary muscles, almost amounting to paralysis ; of all the motor nerves the third was the earliest and most deeply affected. At one time it required the greatest effort to raise the eyelids. On the first sudden approach of the above mentioned effects, the action of the heart was, most probably from a feeling of alarm, considerably excited ; and the pulse was small. Tranquil action, however, was restored in a few minutes ; and the pulse remained natural and regular, numbering 68. At 2 p. m. all effect of the conium had passed off.

ART. 19.—*Arsenic in certain Kinds of Gastric Pain.* [Br. Med. Jour. Nov. 1867.]

Dr. Arthur Leared has found the administration of arsenic, in certain refractory cases of gastric pain, at-

tended with the greatest benefit. The pain in question seems neuralgic, and is unconnected with organic disease or with dyspepsia. The pain is intermitting, but the intermissions commonly become less and less protracted. At first measured by months, they afterwards are spanned by weeks or even days. The seizure occurs without notice, and generally when the stomach is empty. The pain is variable both in degree and kind; sometimes intense and fixed to a spot in the epigastrium, sometimes diffused and cramp-like, occasionally extending over a great part of the abdomen. When it has continued for some time, vomiting of a glairy fluid or of bile, or food, if any be present, ensues. In mild attacks vomiting does not occur. When the pain is intense, the state of the patient borders on collapse; the pulse feeble, often slow, the face pallid, the features pinched, and the surface bathed in cold perspiration. Sometimes stimulants or food give relief, sometimes they increase the pain. The attack may last half an hour or may extend to several hours. For some time after it has passed off there is tenderness over the epigastrium, in other respects, with the exception of prostration the patient feels well. In all the cases met with by Dr. Leared, the patients were of middle age, and subject to some source of anxiety, loss of friends, loss of money or the cares of a family. Malaria was also specially noted as being an excitant. Dissatisfied with the effects of ordinary remedies, Dr. Leared resorted to the use of arsenic, and with complete and rapid success. The arsenic was given in the form of Fowler's solution, the dose being at first small and gradually increased.

Dr. Leared sets down, in the order of the frequency of their occurrence, the following cases of gastric pain, in which arsenic would be unsuitable:

1. Unnatural susceptibility of the stomach to the contact of food, except that which occurs in certain cases of phthisis.
2. Pyrosis not of malarious origin.

3. Subacute gastritis.
 4. Ulcer of the stomach.
 5. Unnatural sensibility from gastric congestion, due to disease of the heart.
 6. Cancer.
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Varia.

THE MEDICAL GAZETTE, AND AMERICAN JOURNAL OF OBSTETRICS.—In consequence of changes in the house of Moorhead, Bond & Co., these Journals have been, like ourselves, for a time afloat, but have finally drifted into a harbor of safety, and we are happy to announce that their publication will be continued. The Editors of each have become the proprietors of these Journals. The Obstetrical Journal will be issued for Dr. Dawson by the house of W. A. Townsend & Adams, favorably known as publishers of the American reprint of Braithwaite's Retrospect, and the Gazette is published by Mr. John Sarell, of this city.

Issues of both these Journals have made their appearance this week, doubtless much to the relief of the subscribers as well as the satisfaction of the proprietors.

REGULATION OF JUVENILE LABOR IN FRANCE.—A new code of regulations with respect to the labor of young persons in factories is to be shortly laid before the Corps Legislatif. The following are said to be the principal provisions:—The age to which six hours of labor is the maximum, is to be increased from twelve to thirteen years; from ten to fourteen, children may be employed in coal and other mines, but not more than four days in the week. All young persons, to

the age of sixteen, to have time to go to school during two hours of the day. Young persons between the ages of thirteen and sixteen years may be employed, as at present, during ten hours per day, but they are not to be allowed to manage steam engines or other machinery. No young person above thirteen years of age is to be employed in a factory or mine without proof that he or she has received three years' primary instruction. With respect to girls, the regulations will be more particular than those of the law of 1841, now in force. In the first place they are to be utterly excluded from working in subterranean galleries of mines, and no girl under eighteen years of age is to be employed more than ten hours a day. The primary education and religious instruction of minors will be the object of regulations to be made by the local commissions of surveillance, and the regional inspectors now existing will have for assistants the inspectors of the asylums, the guards of mines, the inspectors of infant asylums, and the delegates of the societies for mutual assistance, and of the bureaux of public charity.—*Journal of the Society of Arts.*

THE DEAD ALIVE.—Here is something gay, in the way of inventions. You recollect Edgar Poe's catalepsy coffin, with inside cushions for comfort, and springs for the moment of waking. The idea was very elementary and perhaps practical. But a Frenchman has beaten it all to pieces. He calls his invention a "Respiratory-Advertising Apparatus for Precipitate Inhumations." You can see the mechanism of the thing from where you are. "You can breath while notifying the outside world that you are resurrected." What *naïveté*! By this invention the buried individual puts himself in communication with the living by means of a tube fixed over the mouth with a funnel-shaped mouth-piece, the other end projecting from the

earth or stone above. "If the individual," to quote the prospectus, "finds himself uneasy in his position (!) he has only to demand the attention of the guardians of the cemetery, which he can easily do, and his case will be attended to at once."

So that if this ingenious invention comes into general use, the people who select the cemeteries as a place of resort, must not be surprised hereafter at hearing queer sounds from time to time proceeding from the earth around them. We can imagine the surprised promenader exclaiming to a guardian: "What! you allow people to play the trombone here?" and the guardian replying: "That's no trombone. It's the old fellow of yesterday—down there—the seventh to the left—who demands a change of base!"

The inventor thinks no family ought to be without one of his tubes. The charming man! Pretty soon he will pretend that children cry for them.—*Paris Cor. N. Y. Times.*

STATISTICS OF SUICIDE.—The death registers show few, if any, items more remarkable for the constant ratio of their occurrence than the regularity with which suicide counts its victims. In this country, year after year, more than 1,300 men and women driven to desperation by their own folly or by some overwhelming misfortune, seek refuge from trouble in death; some of these—it is not recorded how many—belong, of course, to the class of irresponsible beings whose deficient mental organization incapacitates them from being safe custodians of their own lives. The statistics of suicide in England, according to the Registrar-General's returns, show that the annual proportion to every million of the population has ranged in the eight years from 1858 to 1865, successively thus: 66, 64, 70, 68, 65, 66, 64, 67. With two exceptions, therefore, the last state of things is worse than the first. No account

is kept of the attempts which are frustrated, so that there is nothing beyond surmise to give any clue to the probable movement of the tendency to suicide among us. It is, however, certain that the figures we have quoted above do not fully represent the extent of the crime, inasmuch as some—no one can possibly know how many—of the deaths by drowning and other means must be set down to self-destruction. The extraordinary regularity with which the same means are employed for the same end is not the least curious feature in these statistics. Hanging has always been the mode most commonly adopted, and 28 out of the ratio of 67 per million suicides of 1865 fall under this head, the proportion having remained almost constant in successive years. Cutting or stabbing and drowning, accounting for an almost equal proportion (12 and 11 out of the 67 per million,) come next in the order of frequency; then follow poisoning (7) and gunshot wounds (3,) the residue (6) not being specifically described. The ratio of suicides by means of firearms was 3 per million in each one of the eight years, and the other ratios show little or no variation. Dr. Young, in his "Night Thoughts," speaks of "Britain, infamous for suicide;" and, judging from a recent comparison in a French statistical journal, we still maintain a very unsatisfactory position as regards some other European states. The ratio of suicides per million of the respective populations in 1864 was 110 in France, 64 in England, 45 in Belgium, 30 in Italy, and 15 in Spain. This must of course be taken *cum grano*, as notwithstanding the efforts of statistical congresses, international comparisons are still surrounded with great uncertainty.—*Journal of Mental Science*, Oct. 1868.

DEATH FROM CHLOROFORM.—Dr. Richard O. Cowling, of Lousville, reports (Phil. Med. and Surg. Reporter, Feb. 8, 1868,) the case of a girl twelve years of

age, suffering from necrosis of the lower end of the tibia. She was admitted to the city hospital, Sept. 16, 1867. January 3, 1868, she was placed under the influence of chloroform for the purpose of exploring the sinuses and ascertaining the extent of the disease. About two ounces of chloroform (Squibb's) were used, and no unusual effects from the anæsthetic were observed. January 7, she was again placed under the influence of chloroform for the purpose of an operation. The chloroform was administered on a folded towel, a quantity sufficient to moisten about two square inches being poured from the bottle at a time. The pulse was 104, strong and regular, and anæsthesia being complete the operation was begun, and the towel was applied to the face from time to time as she seemed to come from under the influence of the chloroform. Shortly afterward her face was observed to grow deadly pale, there was twitching of the muscles about the mouth, the eyes rolled upward, became fixed, the pupils were widely dilated, the breathing became stertorous, and the pulse at the wrist was imperceptible. The tongue was immediately seized with forceps and drawn forward, ammonia was applied to the nostrils, whiskey poured down the throat, and cold water dashed on the face and chest. No sound of the heart's action could now be detected, and Marshall Hill's method for continuing the respirations was employed, but all to no effect. She died twenty-five minutes after the inhalation began, and during this time about an ounce of chloroform had been consumed.

A very careful post-mortem examination was made, of which the following is the report:

“*Post Mortem.*—By L. D. Kastenbine, A.M., M.D. Sectio Cadaveris, five hours after death. Body had no post mortem suggilations. On the internal malleolus of right leg was found a sinus or fistulous opening leading to diseased bone. This opening was enlarged by an incision about half an inch in length, and extending to the bone. The cut appeared to be recent.

The tissues were dissected from the ankle joint, when a necrosed condition of the entire tibial malleolus was revealed.

“The brain and its membranes healthy and free from congestion. Serum in all the ventricles, about one ounce.

“Lungs were in a state of venous congestion—right more so than left. The former on dividing its substance with scalpel, poured forth black blood in considerable quantity. Adiposity of pericardium. Heart healthy in texture, with fluid blood occupying both sides, with a few clots in right—about half an ounce in left, and treble that amount in right ventricle. The latter ventricle was soft and flaccid, the former had its walls rigidly contracted. Valves healthy. Two fibrinous clots were also found, one occupying the right auriculo-ventricular opening, the other in the left ventricle, extending from mitral valve to semilunar or aortic valve. The extent of disease showed that surgical interference was justifiable. The mode of death was by syncope.”

At the coroner's inquest the examination turned on the following points :

1. Was there a necessity for an operation ?
2. If so, was it one justifying the use of chloroform ?
3. Was the patient willing to have it done ?
4. Was there an examination made of the heart and lungs previous to the operation, by Professor Bayless, or one made and reported to him by his assistant ?
5. Did Prof. Bayless use the same care in this case as he would have done had it occurred in his private practice ?
6. Were the proper precautions observed in giving the chloroform ? was it given with due care ? was the amount inhaled unusually large ? and had the one administering it sufficient experience ?
7. Were the proper means used to resuscitate the patient ?

8. What was the cause of her death?

The verdict, after a most searching inquiry and most minute examination of reports and authorities, was to the effect that "The deceased, Eliza O'Bryan, came to her death, on the afternoon of January 7, 1868, at three o'clock, from the inhalation of chloroform administered to her for surgical purposes, but that no blame can be attached to the surgeon or his assistants on the occasion."

THE NUTRIMENT OF BEER.—People who drink their ale and beer are very fond of telling how much nutriment they derive from them. Because they are manufactured from grain, many have the idea that the concentrated virtues of the grain are in the drinks. This is an entire fallacy. Professor Liebig, one of the most eminent chemists in the world, assures us that 1,460 quarts of the best Bavaria beer contain exactly the nourishment of a two-and-a-half-pound loaf of bread. This beer is very similar to the famous English Allsop's, and our more popular American beer. The fact is, the nutritious portion of the grain is rooted out before beer can be made; and if the fermentation of the beer has been complete, Professor Lyon Playfair declares that no nourishment whatever remains in the fermented liquor; and, as the English Alliance News says, "No chemist now disputes this assertion; for, except in flavor and amount of alcohol, the chemical composition of all kinds of beer is alike, and brewers must laugh to hear doctors advising porter as more nourishing than beer, when porter is nothing but beer colored by burnt malt; and *o* when beer goes wrong in the making, and is unsaleable as beer, it is converted into fine porter, the mere color covering many defects.—*Boston Journal of Chemistry.*

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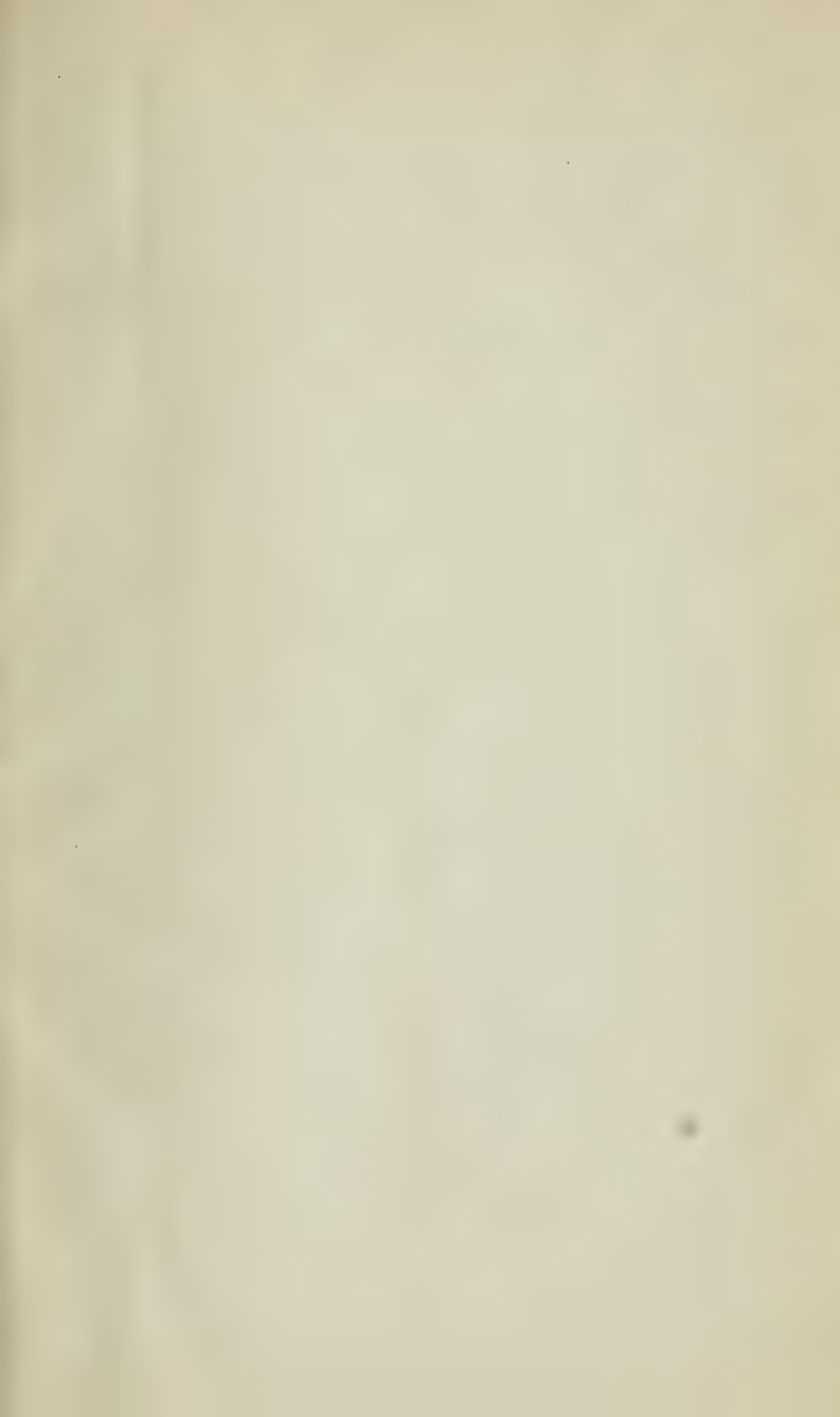
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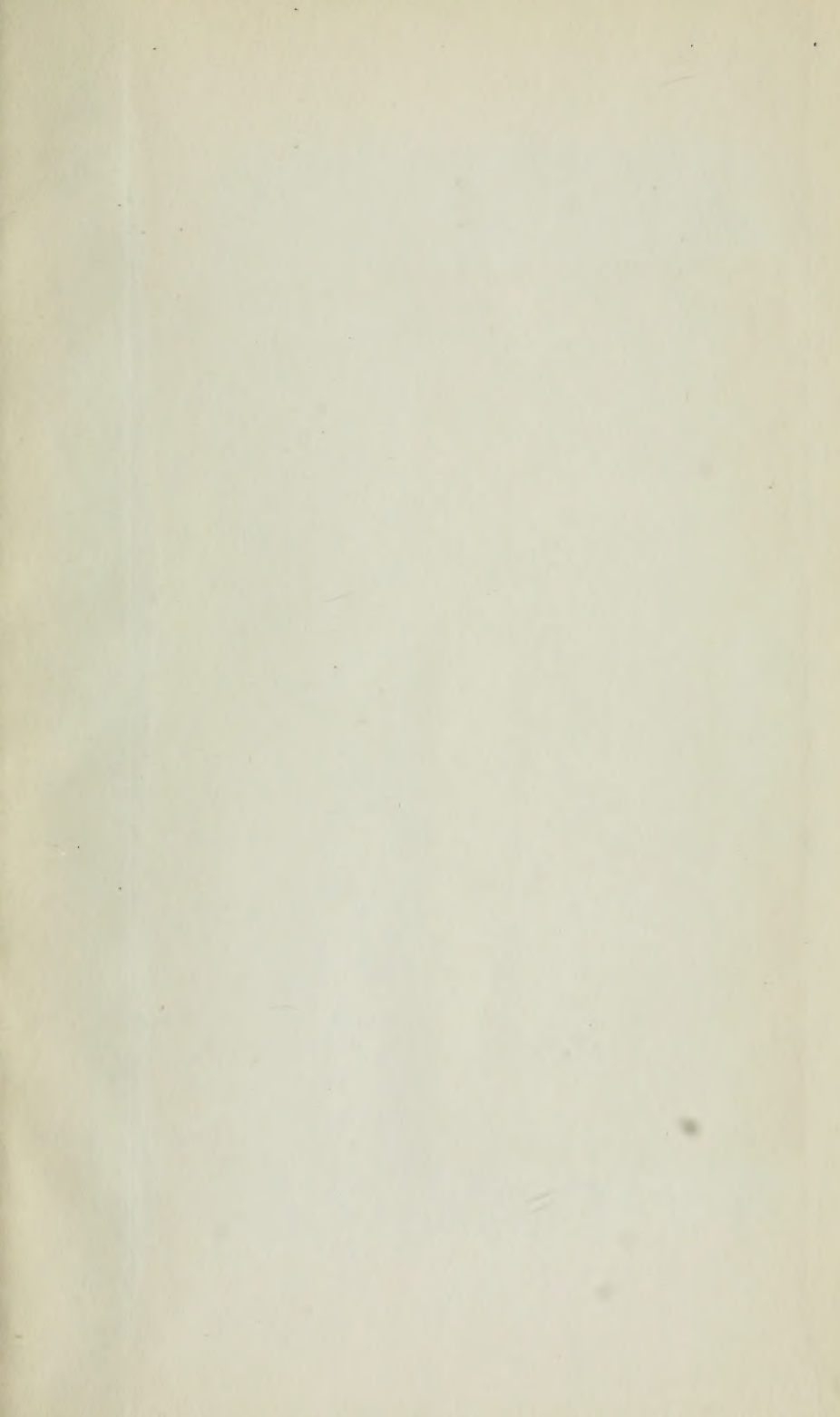
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- The Medical Mirror.
- The Edinburgh Medical Journal.
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